

CONTRACT BIDDING DOCUMENTS

FOR

NEW RESTROOM BUILDING

AT

EISENHOWER PARK

BID# 200015



INFORMATION

NEW RESTROOM BUILDING EISENHOWER PARK

22 Sheep Hill Road
West Hartford, CT 06117

BID# 200015

ARCHITECT

Bostwick ARCHITECTS, LLC
56 Arbor Street
Hartford, CT 06106

STRUCTURAL ENGINEER

Toce Structural Engineering, LLC
1755 Meriden Waterbury Turnpike, Unit 6
Milldale, CT 06467

M/E ENGINEER

RZ Design Associates, Inc.
750 Old Main Street, Suite 202
Rocky Hill, CT 06067

PROJECT MANAGER

MIKE LONGO
FACILITIES MANAGER

ALL QUESTIONS TO

PURCHASING SERVICES
TAMMY BRADLEY

All questions must be submitted in writing and emailed to tammyb@westhartfordCT.gov, at least seven calendar days prior to the date established for the opening of bids. Please do not call the Engineer/ Architect, Project Manager or Purchasing Office with questions.

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PROJECT NARRATIVE

The Town of West Hartford is seeking a qualified contractor to do remove and build a new ADA Restroom Building at the Eisenhower Park. This project will be located at Eisenhower Park, 33 Sheep Hill Road, West Hartford, CT. It will involve the demolishing and removal of the existing restroom building and installation of new restroom building on its existing foundation as describe by the architects drawings and manual. FM Global, the town's insurance carrier, will review the new building and all recommendations made by them are to be followed. Work must be coordinated with the park as not to interfere with their normal business routine and is anticipated to be substantially completed by June 15, 2020 and final completion by June 30, 2020. The work area must be kept cleaned and free of hazards at all times.

The Scope of Work will consist of but not limited to the following installation:

- See Architect's drawing and manual.

Any areas disturbed by construction shall be repaired and painted to match existing conditions.

All work must conform to all Federal, State and Local codes.

All necessary permits will be the responsibility of the contractor. Fees are waived.

LIST OF DRAWINGS

COVER SHEET

ARCHITECTURAL

A - 0.1 INFORMATION SHEET, MOUNTING HEIGHTS, SYMBOLS, DRAWING LIST
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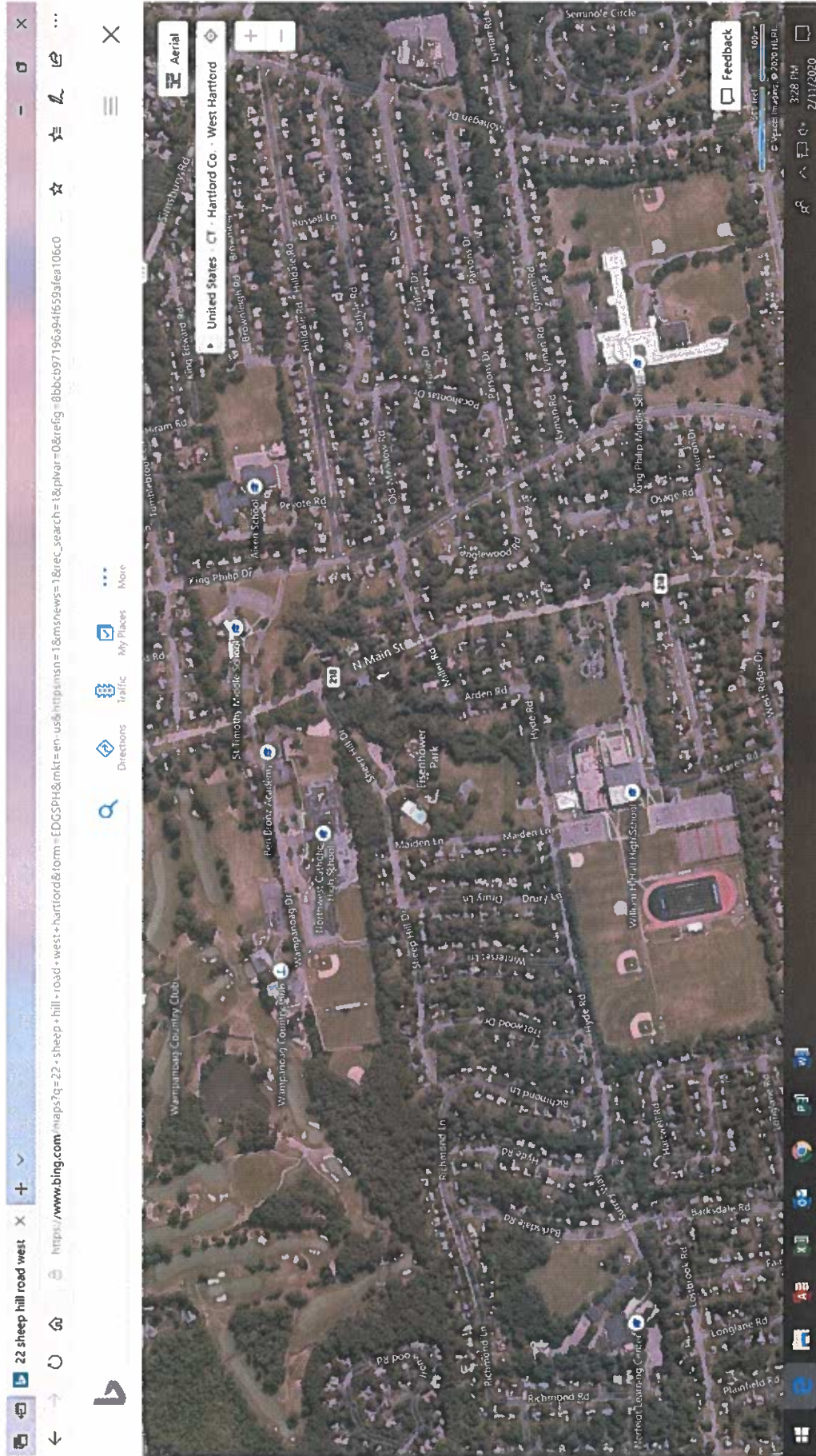
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FIRE PROTECTION NOT APPLICABLE



General

1. Contractor, Supervisory, and Trades personnel will be required to be familiar with and adhere to the Project Work Rules. Failure to comply with the Work Rules may result in being banned from the project site.
2. The Contractor shall take direction only from the Capital Project Manager or their representative.
3. All construction activities that are disruptive to school operations (due to noise, vibration, dust, orders, etc.) shall occur outside regular school instructional hours.
4. Contractors shall not use Town-owned dumpsters for refuse disposal unless given prior written permission from the Town's capital projects manager.
5. No entry into the building is allowed without prior permission of the Town. When entry is granted each individual must sign in at the main office and obtain a visitor's badge.
6. Have staff available on site to receive and upload your materials whenever deliveries are made. If Contractor staff is not available the delivery will be refused.
7. The Contractor shall maintain, at the site, one copy of the drawings, specifications, addenda, change orders and other modifications, in good order and marked currently; and one copy of approved shop drawings, product data, samples and similar required submittals.
8. Maintain complete files of Material Safety Data Sheets (MSDS) on the jobsite.
9. The Owner does not provide secure storage for the Contractor's materials and tools.

Foreman/Supervisory Personnel

1. The Trade Foreman/Superintendent must be on the jobsite whenever their staff is on site. This includes subcontractor personnel.

All Contractor Personnel

1. Contractors, subcontractors, and all their personnel shall wear a uniform with the company's logo while on site.
2. For individuals working in school buildings or on school sites, the Contractors must conduct a criminal background check. Prior to working in any school building, the Contractor shall provide verification that their employees and subcontractors do not appear on any Sex Offender Registry.
3. Job hours are 7:00 AM to 3:30 PM for first shift and 3:30 PM to 11:00 PM for second shift. Additional time may be subject to custodial overtime charges of approximately \$40.00 per hour.

4. Materials deliveries or movement of construction vehicles is not permitted among buses and students during drop-off of pickup times 8:00-8:45 AM & 3:15-3:45 PM Monday, Tuesday, Thursday, Friday and 1:45-2:15 PM on Wednesday. Times vary among elementary, middle and high school and will be confirmed with the Contractor.
5. No alcohol or controlled substances are allowed on the school property.
6. No smoking is allowed within the building or on the school property.
7. No food is to be eaten in the building. All food-related trash is to be removed from the site at the end of each day.
8. Use of radios and other amplified sound systems is disruptive to building occupants and is not permitted during classroom instructional hours.
9. Clean up all work areas daily. Keep the job clean and debris free.
10. Coordinate your work with the work of other trades. Check preceding work prior to starting new work. Do not proceed unless preceding work is completely acceptable.
11. Protect your work at all times from damage.
12. Park in designated areas only. Keep parking areas accessible for emergency vehicles. Privately owned vehicles are not permitted in areas of construction.
13. Passenger elevators are not to be used by Contractors for transporting materials.

Safety

1. All work activities are to be planned with Safety as the #1 priority.
2. A copy of the Contractor's safety program shall be present at job site.
3. A first aid kit appropriate to the size of the work crew is to be provided by the Contractor
4. Appropriate fire extinguishing supplied by the Contractor shall be present at the work area.
5. All personnel in work areas will have, at a minimum, hard hats, safety glasses, work shoes, shirts with sleeves, and long pants. Hard hats have to have company and employees name.
6. No interruption of building services (e.g. power, water, fire alarm intercom, ventilation, heating, cooling, etc.) without prior coordination with, and permission from, the Owner.
7. No use of any tools, equipment or supplies, other than those supplied by the Contractor.

- L.** Noise created as a result of or relating to an emergency.
- M.** Noise generated by construction activity shall be exempted between the hours of 7:00 a.m. to one hour after sundown, Monday through Saturday.
- N.** Noise created by blasting other than that conducted in connection with construction activities shall be exempted, provided that the blasting is conducted between 8:00 a.m. and 5:00 p.m. local time at specified hours previously announced to the local public or provided that a permit for such blasting has been obtained from local authorities.
- O.** Noise created by on-site recreational or sporting activity which is sanctioned by the state or local government, provided that noise discharged from exhausts is adequately muffled to prevent loud and/or explosive noises therefrom.
- P.** Patriotic or public celebrations not extending longer than one calendar day.
- Q.** Noise created by aircraft.
- R.** Noise created by products undergoing test, where one of the primary purposes of the test is the evaluation of product noise characteristics and where practical noise control measures have been taken.
- S.** Noise generated by transmission facilities, distribution facilities and substations of public utilities providing electrical powers, telephone, cable television or other similar services and located on property which is not owned by the public utility and which may or may not be within utility easements.

INVITATION TO BID

Sealed bids marked "**New Restroom Building at Eisenhower Park BID# 200015**" will be received at the office of the Purchasing Division, Room 223, Town Hall, 50 South Main Street, West Hartford, Connecticut until **2:00 PM on March 11, 2020** at which time they will be publicly opened and read.

Plans and specifications are available for downloading at www.westhartfordct.gov/bids. Any questions concerning this request for bid shall be addressed to the Purchasing Agent at the address above.

A pre-bid conference will be held on February 26, 2020 at 11:30 AM at Eisenhower Park, 33 Sheep Hill Rd, West Hartford, CT at which time questions concerning the project will be answered. Prospective bidders are expected to attend the pre-bid meeting as this will be the only opportunity to verbalize questions relative to this project and view the job site with the Town's project team.

All Bidders must file with their bid a bid bond, certified or treasurer's check in the amount of 10% of the total of the base bid made payable to the Town of West Hartford.

Performance and Labor and Material Payment bonds in the amount of 100% of the contract price will be required of the successful bidder if the contract pursuant to this request for bids exceeds \$50,000.00.

No bid may be withdrawn for a period of ninety (90) days after the opening of bids without the approval and written consent of the Town of West Hartford.

The right is reserved to reject any and all bids, to waive any informalities in the bidding and to make awards in any manner that is the most beneficial to the Town.

Bidders are encouraged to attend the Town's bid opening at which time the public is afforded an opportunity to record bid prices received in response to the Town's solicitation. Bidders who would like the results of the bid but are unable to attend the bid opening, may check the Town website, www.westhartfordct.gov/gov/departments/purchasing/bid_results a week after the bid opening date. Bidders calling the Purchasing Office for bid results will be referred to the above procedure.

TOWN OF WEST HARTFORD
PETER PRIVITERA
PURCHASING AGENT

AIA® Document A701™ – 1997

Instructions to Bidders

for the following PROJECT:

(Name and location or address)

BID#200015 NEW RESTROOM BUILDING AT EISENHOWER PARK
22 Sheep Hill Road
West Hartford, CT

THE OWNER:

(Name, legal status and address)

Town of West Hartford
50 South Main Street
West Hartford, CT 06107

THE ARCHITECT:

(Name, legal status and address)

Bostwick Architects LLC
56 Arbor Street
Hartford, CT 06106

THE STRUCTURAL ENGINEER:

(Name, legal status and address)

Toce Structural Engineering LLC
1755 Meriden Waterbury Tnpk, Unit 6
Milldale, CT 06467

THE ENGINEER:

(Name, legal status and address)

RZ Design Associates Inc
750 Old Main Street, Suite 202
Rocky Hill, CT 06067

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement or Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders, the bid form, and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, or in other Contract Documents are applicable to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 The Bidder by making a Bid represents that:

§ 2.1.1 The Bidder has read and understands the Bidding Documents or Contract Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being bid concurrently or presently under construction.

§ 2.1.2 The Bid is made in compliance with the Bidding Documents.

§ 2.1.3 The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.

§ 2.1.4 The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 COPIES

§ 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated therein. The deposit will be refunded to Bidders who submit a bona fide Bid and return the Bidding Documents in good condition within ten days after receipt of Bids. The cost of replacement of missing or damaged documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the Bidding Documents and the Bidder's deposit will be refunded.

§ 3.1.2 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the Advertisement or Invitation to Bid, or in supplementary instructions to bidders.

§ 3.1.3 Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

§ 3.1.4 The Owner and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

§ 3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

§ 3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered.

§ 3.2.2 Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least seven days prior to the date for receipt of Bids.

§ 3.2.3 Interpretations, corrections and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

§ 3.3 SUBSTITUTIONS

§ 3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.

§ 3.3.2 No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.3 If the Architect approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

§ 3.3.4 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.4 ADDENDA

§ 3.4.1 Addenda will be transmitted to all who are known by the issuing office to have received a complete set of Bidding Documents.

§ 3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

§ 3.4.3 Addenda will be issued no later than four days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 PREPARATION OF BIDS

§ 4.1.1 Bids shall be submitted on the forms included with the Bidding Documents.

§ 4.1.2 All blanks on the bid form shall be legibly executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.

§ 4.1.4 Interlineations, alterations and erasures must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change."

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall make no additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name of the Bidder and the nature of legal form of the Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

§ 4.2 BID SECURITY

§ 4.2.1 Each Bid shall be accompanied by a bid security in the form and amount required if so stipulated in the Instructions to Bidders. The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and will, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. The amount of the bid security shall not be forfeited to the Owner in the event the Owner fails to comply with Section 6.2.

§ 4.2.2 If a surety bond is required, it shall be written on AIA Document A310, Bid Bond, unless otherwise provided in the Bidding Documents, and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney.

§ 4.2.3 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either (a) the Contract has been executed and bonds, if required, have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn or (c) all Bids have been rejected.

§ 4.3 SUBMISSION OF BIDS

§ 4.3.1 All copies of the Bid, the bid security, if any, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

§ 4.3.2 Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.

§ 4.3.3 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.4 Oral, telephonic, telegraphic, facsimile or other electronically transmitted bids will not be considered.

§ 4.4 MODIFICATION OR WITHDRAWAL OF BID

§ 4.4.1 A Bid may not be modified, withdrawn or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.

§ 4.4.2 Prior to the time and date designated for receipt of Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the

signature of the Bidder. Written confirmation over the signature of the Bidder shall be received, and date- and time-stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.

§ 4.4.3 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

§ 4.4.4 Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 OPENING OF BIDS

At the discretion of the Owner, if stipulated in the Advertisement or Invitation to Bid, the properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders.

§ 5.2 REJECTION OF BIDS

The Owner shall have the right to reject any or all Bids. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

§ 5.3 ACCEPTANCE OF BID (AWARD)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.

§ 5.3.2 The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 CONTRACTOR'S QUALIFICATION STATEMENT

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request, a properly executed AIA Document A305, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted as a prerequisite to the issuance of Bidding Documents.

§ 6.2 OWNER'S FINANCIAL CAPABILITY

The Owner shall, at the request of the Bidder to whom award of a Contract is under consideration and no later than seven days prior to the expiration of the time for withdrawal of Bids, furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Unless such reasonable evidence is furnished, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 6.3 SUBMITTALS

§ 6.3.1 The Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, after notification of selection for the award of a Contract, furnish to the Owner through the Architect in writing:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the manufacturers, products, and the suppliers of principal items or systems of materials and equipment proposed for the Work; and
- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder in writing if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1)

withdraw the Bid or (2) submit an acceptable substitute person or entity with an adjustment in the Base Bid or Alternate Bid to cover the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 BOND REQUIREMENTS

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Bonds may be secured through the Bidder's usual sources.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 If the Owner requires that bonds be secured from other than the Bidder's usual sources, changes in cost will be adjusted as provided in the Contract Documents.

§ 7.2 TIME OF DELIVERY AND FORM OF BONDS

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to be commenced prior thereto in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond. Both bonds shall be written in the amount of the Contract Sum.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment Is a Stipulated Sum.

INSTRUCTIONS TO BIDDERS

AIA Document A701, "Instructions to Bidders", 1997 Edition, American Institute of Architects, Articles 1 through 8, are bound herein and are hereby made a part of the Contract Documents, and shall apply to all Contractors and Subcontractors.

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

Certain Articles of the AIA Instructions to Bidders are revised or replaced by requirements of the Supplementary Instructions, listed below. Such revisions are replacements and shall take precedence over the AIA Instructions to Bidders.

The Following Articles, revised paragraphs, and clauses have the same numerical designations occurring in the AIA Instructions to Bidders, and all additions follow in direct numbered sequence.

Article 1 - Definition

- 1.3 Delete paragraph 1.3 in its' entirety and substitute the following: Addenda are written or graphic instruments issued by the Architect and distributed by the Owner prior to the bid opening which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

Article 2 - Bidder's Representation

Add the following as paragraphs 2.2 and 2.3

- 2.2 A pre-bid conference may be held prior to bidding, at which time all interested parties are requested to attend. The intent of the project and Bidding Documents will be discussed. There will be a question and answer period, during which time prospective bidders are invited to request clarification or interpretation of any and all parts of the Bidding Documents. See Invitation to Bid for date, time, and location of Conference.
- 2.3 Guided tours of the Project Site, at the discretion of the owner, may be conducted prior to the pre-bid conference. Questions and or requests for clarification will not be addressed while the tour is being conducted.

ARTICLE 3 - BIDDING DOCUMENTS

- 3.1.1: Delete second sentence and substitute with the following:

Refer to instructions on Invitation to Bid Page 00201-1.

3.1.2: Delete Paragraph 3.1.2.

3.2.2: Delete the word "Architect" and substitute the word "Owner".

3.3.4: Delete paragraph 3.3.4 in its entirety and substitute with the following:

After the award of the Contract, no substitutions will be considered for the brands specified, except upon written request of the Contractor and written approval by the Architect and Owner. Substitutions shall be submitted in accordance with the requirements listed in Article 3.3.2.

3.3.5: Add new paragraph 3.3.5 as follows:

Approval by the Owner and the Architect of any such substitution shall not relieve the Contractor requesting the substitution of any responsibility for additional costs incurred by other trades for changes made necessary to accommodate the substituted item.

3.4.1: Delete paragraph 3.4.1 in its' entirety and substitute with the following:

Addenda will be issued by the Owner and will be mailed to all who are known by the Owner to have received a completed set of Bidding Documents.

ARTICLE 4 - BIDDING PROCEDURES

4.1.6: Add the following words to the beginning of paragraph - "Unless otherwise provided in the Contract Bidding Documents".

4.1.7: Delete paragraph 4.1.7 in its' entirety and substitute with the following:

Each copy of the Bid shall include the legal name of the bidder and a statement that the Bidder is a sole proprietor, partnership, corporation or other legal entity. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and, if the Owner so requests, have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

4.2.2: Delete paragraph 4.2.2 in its' entirety and substitute with the following:

Surety Bonds shall be written on forms substantially similar in content to AIA Document A310, and executed by a company authorized to transact business within the State of Connecticut, and the attorney-in-fact who executes the Bond on behalf of the Surety shall affix to the Bond a certified and current copy of his power of attorney.

ARTICLE 5 - CONSIDERATION OF BID

5.1.1: Add new paragraph 5.1.1 as follows:

Bidders are encouraged to attend the Town's bid opening at which time the public is afforded an opportunity to record bid prices received in response to the Town's solicitation. Bidders who would like the results of the bid but are unable to attend the bid opening must submit with their bid a self addressed stamped envelope and note requesting a copy of the bid results. **BIDDERS CALLING THE PURCHASING OFFICE FOR BID RESULTS WILL BE REFERRED TO THE ABOVE PROCEDURE.**

5.3.1: Delete 1st sentence and substitute the following:

It is the intent of the Owner to award a Contract to the bidder providing the best value to the Owner and is in accordance with requirements of the Bidding Documents and does not exceed the funds available.

5.3.3: Add new paragraph 5.3.3 as follows:

The Owner in awarding the Contract shall be guided by pertinent provisions of the "Town Charter" and "Code of Ordinances".

5.3.4: Add new paragraph 5.3.4 as follows:

A Bid may be rejected if the Bidder cannot show that he has the necessary supervisory staff, labor, capital, materials, machinery and resources to commence the work at the time prescribed and thereafter to prosecute and complete the Work at the rate or time specified; and that he is not already obligated for other work which would delay the commencement, prosecution, or completion of this work. A Bid may also be rejected if the bidder has previously failed to complete a contract within the time required, had previously performed similar work in an unsatisfactory manner, or in the judgment of the Owner is deemed unable to satisfactorily perform the Work.

5.3.5: Add new paragraph 5.3.5 as follows:

Prior to the award of a Contract, if so requested, Bidders must present satisfactory evidence that they have been regularly engaged in the business of doing such Work as they propose to execute and that they are prepared with the necessary supervisory staff, labor, capital, materials, and machinery, resources and responsibilities to conduct and complete the work to be contracted for in accordance with the Contract Documents and to begin it promptly when ordered.

ARTICLE 6 - POST BID INFORMATION

6.3.3: Delete paragraph 6.3.3 in its' entirety and substitute with the following:

Prior to the award of the Contract, the Owner will notify the Bidder in writing if either the Owner or the Architect, after due investigation, has a reasonable objection to any such proposed person or entity. If the Owner or Architect has reasonable objection to any such proposed person or entity, the Bidder may, at his option, (1) withdraw his Bid, or (2) submit an acceptable substitute person or entity. In the event of withdrawal under this sub-paragraph, Bid Security will not be forfeited, notwithstanding the provisions of Paragraph 4.4.1.

ARTICLE 7 - PERFORMANCE BOND AND PAYMENT BOND

7.1.1: Delete paragraph 7.1.1 in its' entirety and substitute with the following:

If the amount of the Contract to be awarded is Fifty Thousand Dollars (\$50,000) or more, the successful Contract Bidder shall furnish and pay for Surety in the full amount of the Contract. This Bond shall provide 100% security for faithful performance and for payment of all persons performing labor or furnishing materials in connection with this Contract and shall be executed by a company authorized to transact business within the State of Connecticut.

The Contractor shall increase the principal amount of the performance and labor and materials payments bond(s) in direct proportion to any increase in the value of the Contract resulting from such change orders.

7.2.1: Delete paragraph 7.2.1 and substitute the following:

The Bidder shall deliver the required bonds to the Owner prior to execution of a contract and not later than (5) five days from notice of the Owner's intent to award the Contract to the bidder.

ARTICLE 9 - SUPPLEMENTARY INSTRUCTIONS

9.1: Add new paragraph 9.1 as follows:

9.1.1 - The Contractor shall agree that, except in the case of bona fide occupational qualification or need, neither he nor his Subcontractors and/or agents will refuse to hire or employ, or will bar or discharge from employment, or will otherwise discriminate against any individual in compensation or in terms, conditions, or privileges of employment because of race, color, national origin, ancestry, present or past history of mental disorder, mental retardation, or physical disability, including, but not limited to, blindness.

9.1.2 - The Contractor shall further agree that neither he nor his subcontractors and/or agents will discharge, expel, or otherwise discriminate against any person because he/she has opposed any discriminatory employment practice or because he has filed a complaint or testified or assisted in any proceeding under Connecticut General Statutes Sections 46a-82, 46a-83, or 46a-84 or as may be amended.

9.1.3 - The Contractor shall further agree that, except in the case of a bona fide occupational qualification or need, neither he nor his subcontractors and/or agents will advertise employment opportunities in such manner as to restrict such employment so as to discriminate against individuals because of their race, color, religious creed, age, sex, marital status, national origin, ancestry, present or past history of mental disorder, mental retardation or physical disability, including, but not limited to, blindness.

9.1.4 - The terms used in paragraphs 9.1.1, 9.1.2, and 9.1.3 shall have the definitions set forth in Connecticut General Statutes Section 46a-51 or as may be amended.

9.1.5 - The Contractor further agrees, for himself, his subcontractors, and agents, not to otherwise discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, sex, marital status, national origin, ancestry, present or past history of mental disorder, mental retardation or physical disability (including but not limited to blindness) in any manner prohibited by the laws and regulations of the United States, State of Connecticut or Town of West Hartford.

9.2: Add new paragraph 9.2 as follows:

Time: The Contractor to whom this Contract may be awarded, will be required to commence work at the site within ten (10) days of Contract signing unless, otherwise indicated in the sample AIA Standard Form of Agreement Form A101. The work shall be executed diligently thereafter and shall be completed in accordance with the Contract Documents.

9.3: Add new paragraph 9.3 as follows:

The Bidder is directed to the Bid Forms for additional information, instructions, qualifications and requirements.

Bid of _____, BIDDER,
(Name of Bidder)

FOR "**New Restroom Building at Eisenhower Park BID# 200015**" FOR THE TOWN OF WEST
HARTFORD, CONNECTICUT.

To: Town of West Hartford
Peter Privitera, Purchasing Agent
Purchasing Services

The undersigned proposes to furnish all labor, materials and equipment, and to perform all work described in the Contract Bidding Documents for **New Restroom Building at Eisenhower Park BID# 200015** in accordance with the Contract Bidding Documents for the amounts shown herein under Schedule of Bids.

Receipt acknowledged of the following addenda:

Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____

It is understood and agreed that the Owner has the privilege of rejecting any or all Bids and of waiving informality in any Bid.

It is further understood and agreed that this Bid shall be irrevocable for ninety (90) calendar days after Bid receipt date.

SCHEDULE OF BIDS

1. Base Bid No. 1 for furnishing all labor, materials, equipment and all else whatsoever necessary to perform all work described in the Contract Bidding Documents for **New Restroom Building at Eisenhower Park**
BID# 200015

for the lump sum of _____
_____ Dollars (\$ _____)

CONTRACT TIME

The undersigned Bidder will accomplish all Work required by the Contract Bidding Documents and will provide Substantial completion by **June 15, 2020**, and will provide the Project, ready for Final Completion, by **June 30, 2020**.

BIDDER QUALIFICATIONS

A: If the Bidder is a Corporation, fill out:

The Bidder is a Corporation, organized under the laws of _____, having its principal office at _____.

The Principal officers of said Corporation, with their titles and addresses, are as follows:

All persons interested in the Bid as principals are to be named above.

B. Bid must be accompanied by either a certified check, treasurer's check or a Bid Bond, as provided in the Invitation to Bid. If a check is enclosed herein, fill out the following:

_____ (Name of Bank)	_____ (Address of Bank)	_____ (Amount of Check)
-------------------------	----------------------------	----------------------------

C. Attached hereto are two forms entitled "Summary of Work History". The Bidder is required to complete Form 1 and 2.

- D. The Bidder is required to submit a Certificate of Insurance in amounts and types specified in Insurance Exhibit or provide a letter from the Bidder's insurance agent or broker that such insurance is obtainable at the time of execution of the Agreement and that a Certificate of Insurance shall be provided to that effect not later than the date of Contract signing. (See page #00204-7)
- E. Contract award will be by AIA Agreement Form 101. A copy of the AIA Form 101 is included for the Bidder's information. The parties shall enter into an Agreement in substantially the same form as the attached subject to technical and other modifications as the parties mutually agree. A purchase order shall be issued by the Town subsequent to the execution of the Agreement.
- F. The Contractor by executing this Bid agrees and represents that no person acting for or employed by the Town of West Hartford is directly or indirectly interested in the Bid or proposed Agreement or in the supplies or works to which it relates, or will receive any part of the profit or any commission there from in any manner which is unethical or contrary to the best interest of the Owner.
- G. The Contractor agrees and warrants that in the performance of this Contract it will not discriminate or permit discrimination against any person or group of persons on the grounds of sex, race, color, religion, age, marital status, ancestry, national origin, past history of mental disorder, mental retardation or physical disability or other basis in any manner prohibited by the laws of the United States, the State of Connecticut, or the Town of West Hartford.
- H. The Contractor shall employ a full time, on-the-job Project Superintendent as his representative.
- I. The Contractor and/or Subcontractor offers and agrees to assign to the Town of West Hartford and/or the West Hartford Board of Education all rights, titles and interest in all causes of action it may have under Section 4 of the Clayton Act., 15 U.S.C. Section 15, or under Connecticut General Statutes 35-24 et. seq., as amended, arising out of the purchase of services, property, or intangibles of any kind pursuant to the Agreement, or Subcontracts thereunder. This assignment shall be made and become effective at the time the Town/Board awards or accepts such Agreement, without further acknowledgment by the parties. In the alternative, at the option of the Town, the Contractor and/or Subcontractor agrees to pay to the Town its proportionate share of recoveries for anti-trust violations which relate to purchases pursuant to this Contract, or Subcontracts hereunder. The Contractor and/or Subcontractor agrees promptly to notify the Purchasing Agent of the Town of West Hartford of suspected anti-trust violations and claims.

J. The Bidder is aware of and agrees that, if awarded an Agreement, he is bound by the following indemnification language:

1. To the fullest extent permitted by law, the Contractor shall release, defend, indemnify, and hold harmless the Town of West Hartford, and the West Hartford Board of Education, their respective boards, commissions, officers, officials, employees, agents, representatives, and servants from any and all suits, claims, losses, damages, costs (including without limitation reasonable attorneys' fees), compensation, penalties, fines, liabilities or judgments or any name or nature for:

1. Bodily injury, sickness, disease, or death; and/or
2. Damage to or destruction of property, real or personal; and/or
3. Financial losses (including, without limitation, those caused by loss of use)

sustained by any person or concern, including officers, employees, agents, Subcontractors or servants of the Town, the Board of Education, or the Contractor, or by the public, which is cause or alleged to have been caused in whole or in part by the negligent act(s) or omission(s) of the Contractor, its officers, employees, agents, or Subcontractors, in the performance of this Agreement or from the inaccuracy of any representation or warranty of the Contractor contained in the Contract Documents. This indemnity shall not be affected by other portions of the Agreement relating to insurance requirements.

2. To the fullest extent permitted by law, the Contractor agrees to release, defend, indemnify, and hold harmless the West Hartford Board of Education, and the Town of West Hartford, their respective boards and commissions, officials, officers, employees, agents, representatives, and servants from any loss, claim, cost penalty, fine or damage that may arise out of the failure of the Contractor, its officers, agents, employees or Subcontractors to comply with any laws or regulations of the United States of America, the State of Connecticut, the Town of West Hartford, West Hartford Board of Education, or their respective agencies. This undertaking shall not be affected by other portions of the Agreement relating to insurance requirements.

K. Substantial completion must be achieved by **June 15, 2020** and final completion must be achieved by **June 20, 2020**. The Contractor shall pay the Owner liquidated damages in the amount of Three Hundred Dollars (\$300.00) per calendar day, which sum is hereby agreed upon, and shall be assessed not as a penalty, but as liquidated damages which the Owner shall suffer by reason of such default. The Owner and Contractor shall acknowledge that failure to effect substantial completion as noted above will precipitate inconvenience and disruption. The Owner and Contractor shall acknowledge that such damages are uncertain or difficult to prove and that the amounts established herein are reasonable assessment of these damages.

BIDDER:

COMPANY

Bidder must sign. Failure to provide an original signature will result in rejection of the bid.

®

SIGNATURE BY DULY AUTHORIZED
(SEAL)

PRINT OR TYPE NAME

The bidder agrees that by affixing their signature to this request for bids, the authorized signatory grants approval to the Town of West Hartford to obtain third party credit reports for the purpose of assessing the financial capacity of the business entity tendering such bid to the Town.

TITLE

DATE

ADDRESS

TELEPHONE

FAX #

E-MAIL

VENDOR FEIN #

BID FORMS TO BE SUBMITTED IN DUPLICATE

If you are not registered with the Town of West Hartford, please go to <https://selfservice.westhartfordct.gov/MSS/Vendors/default.aspx> and select register. Only registered vendors can be awarded the contract.

00204-6

TO: Town of West Hartford
Peter Privitera
Purchasing Agent

FROM:

CLIENT:

DATE:

Dear Mr. Privitera:

In accordance with page 00204-3, Paragraph D of the "Bid Form", please be advised that my client currently has or will have by the date of the execution of the Agreement for this project, a Certificate of Insurance in amounts and types as specified in Article 11 of the Supplementary General Conditions.

Signature
Authorized Agent or Broker

00204-7

**INDEMNIFICATION AND INSURANCE EXHIBIT
CONTRACT BIDDING DOCUMENTS
RESTROOM BUILDING AT EISENHOWER PARK
BID #200015**

I. INDEMNIFICATION

- A. To the fullest extent permitted by law, the Contractor shall release, defend, indemnify, and hold harmless the Town of West Hartford, West Hartford Board of Education, and their respective boards, commissions, officers, officials, employees, agents, representatives and volunteers from any and all liabilities resulting from suits, claims, losses, damages, costs (including without limitation reasonable attorneys' fees), compensation, penalties, fines, liabilities or judgments of any name or nature for bodily injury, sickness, disease, or death; and/or damage to or destruction of real and/or personal property; and/or financial losses (including, without limitation, those caused by loss of use) sustained by any person or concern, including officers, employees, agents, contractors of any tier, or volunteers of the Town of West Hartford and West Hartford Board of Education, or the Contractor, or by the public, caused in whole or in part by any and all negligent or intentional acts, errors or omissions of the Contractor, its officers, agents, contractors of any tier, or anyone directly or indirectly employed by them arising from or related to the performance of this Contract.
- B. To the fullest extent permitted by law, the Contractor shall release, defend, indemnify, and hold harmless the Town of West Hartford, West Hartford Board of Education, and their respective boards, commissions, officers, officials, employees, agents, representatives and volunteers from any and all suits, claims, damages, costs, (including without limitation reasonable attorneys' fees), compensation, penalties, fines, liabilities or judgments that may arise out of the failure of the Contractor, its officers, agents, contractors of any tier, or anyone directly or indirectly employed by them to comply with any laws, statutes, ordinances, building codes, and rules and regulations of the United States of America, the State of Connecticut, the Town of West Hartford, or their respective agencies.
- C. This duty to indemnify shall not be constrained or affected by the Contractor's insurance coverage or limits, or any other portion of the Contract relating to insurance requirements. It's agreed that the Contractor's responsibilities and obligations to indemnify shall survive the completion, expiration, suspension or termination of the Contract.

II. INSURANCE

A. Insurance Requirements

- 1. The Contractor shall obtain and maintain at its own cost and expense all the insurance described below continuously for the duration of the Agreement, including any and all extensions, except as defined otherwise in this Exhibit.
- 2. Contractor's policies shall be written by insurance companies authorized to do business in the State of Connecticut, with a Best's rating of no less than A:VII, or otherwise approved by the Town.
- 3. All policies (with the exception of Worker's Compensation) shall be endorsed to include the Town of West Hartford, West Hartford Board of Education, and their respective boards, commissions, officers, officials, employees, agents, representatives, and volunteers as an Additional Insured. The coverage shall include, but not be limited to, investigation, defense, settlement, judgment or payment of any legal liability. Blanket Additional Insured Endorsements are acceptable. Any Insured vs. Insured language shall be amended to eliminate any conflicts or coverage restrictions between the respective Insureds.
- 4. When the Town or the Contractor is damaged by failure of the Contractor to purchase or maintain insurance required under this Exhibit, the Contractor shall bear all reasonable costs including, but not limited to, attorney's fees and costs of litigation properly attributable thereto.

B. Required Insurance Coverages:

1. **Commercial General Liability:** \$1,000,000 each occurrence / \$2,000,000 aggregate for premises/operations, products/ completed operations, contractual liability, independent contractors, personal injury and broad form property damage. Contractor shall continue to provide products/ completed operations coverage for two (2) years after completion of the work to be performed under this Contract.
2. **Automobile Liability and Physical Damage Coverage:** \$1,000,000 each accident for any auto, including uninsured/underinsured motorist coverage and medical payments. Policy shall include collision and comprehensive physical damage coverage.
3. **Umbrella Liability:** \$2,000,000 each occurrence / \$4,000,000 aggregate, following form.
4. **Workers' Compensation and Employer's Liability:** Statutory coverage in compliance with the Workers' Compensation laws of the State of Connecticut. Policy shall include Employer's Liability with minimum limits of \$1,000,000 each accident, \$1,000,000 disease/policy limit, \$1,000,000 disease/each employee.

The Contractor represents that they are currently in compliance with all requirements of the State of Connecticut Workers' Compensation Act and that it shall remain in compliance for the duration of the Contract. The Contractor agrees that Workers' Compensation is their sole remedy and shall indemnify and hold harmless the Town from all suits, claims, and actions arising from personal injuries to the Contractor, however caused. This indemnity shall not be affected by a lapse of Workers' Compensation coverage and/or if the Contractor failed, neglected, refused or is unable to obtain Workers' Compensation insurance.

5. **Personal Property:** All personal property of the Contractor are the sole risk of the Contractor. The Contractor agrees to indemnify, defend and hold harmless the Town from any and all losses or damages, however caused, to any and all personal property belonging to the Contractor.

C. Additional Terms

1. **Minimum Scope and Limits:** The Contractor's insurance shall meet the scope and limits of insurance specified in this Exhibit, or required by applicable federal, state and/or municipal law, regulation or requirement, whichever coverage is greater. The limits of insurance stated herein for each type of insurance are minimum limits only. If the Contractor's policy provides greater limits, then the Town shall be entitled to the full limits of such policy and this Exhibit shall be deemed to require such full limits.

Acceptance by the Town of insurance submitted by the Contractor does not relieve or decrease in any manner the liability of the Contractor arising out of or in connection with this Contract. The Contractor is responsible for any losses, claims and costs of any kind which exceed the Contractor's limits of liability, or which may be outside the coverage scope of the policies, or a result of non-compliance with any laws including, but not limited to, environmental laws. The requirements herein are not intended, and shall not be construed to limit or eliminate the liability of the Contractor that arises from the Contract.

2. **Certificates of Insurance:** The Contractor shall provide certificates of insurance, policy endorsements, declaration page(s) or provisions acceptable to the Town confirming compliance with this Exhibit and thereafter upon renewal or replacement of each required policy of insurance. Upon request, the Contractor agrees to furnish complete copies of the required policies.
3. **Subcontractors:** Contractor shall cause all contractors of any tier, acting on its behalf, to comply with this Exhibit. The Contractor shall either include its contractors as an Insured under its insurance policies or furnish separate certificates of insurance and endorsements for each subcontractor.
4. **Premiums, Deductibles and Other Liabilities:** Any and all related costs, including but not limited to, deductibles, retentions, losses, claim expenses, premiums, taxes, and audit charges earned are the sole responsibility of the Contractor.
5. **Occurrence Form, Primary and Non-Contributory:** All required insurance coverage shall be written on an occurrence basis, except as defined otherwise in this Exhibit. All policies (including primary, excess and/or umbrella) shall be primary and non-contributory with respect to any other insurance or self-insurance maintained by or available to the Town.

6. Claims-made Form: Insurance coverage written on a claims-made basis shall have a retroactive date that precedes the effective date of this Contract. The Contractor shall maintain continuous coverage or obtain an extended reporting period in which to report claims following end of the Contract, for a minimum of two (2) years, except as defined otherwise in this Exhibit.
7. Waiver of Rights of Recovery: Both the Contractor and Contractor's insurers shall waive their rights of recovery or subrogation against the Town.
8. Claim Reporting: Any failure of the Contractor to comply with the claim reporting provisions of the required insurance policies shall not relieve the Contractor of any liability or indemnification in favor of the Town for losses which otherwise would have been covered by said policies.
9. Cancellation Notice: Each required insurance policy shall not be suspended, voided, cancelled or reduced except after thirty (30) days prior written notice has been given to the Town, ten (10) days for non-payment of premium.
10. Compliance: Failure to comply with any of the indemnification or insurance requirements may be held a willful violation and basis for immediate termination of the Contract.

3.0 LABOR REQUIREMENTS

This project is partially funded with CDBG funds. Therefore Davis Bacon requirements must be met including submitting the enclosed forms, OSHA 10 compliance and that a corporate official, owner, officer or principal of the company - or his or her designee - must sign the Statement of Compliance on all submitted payrolls requiring Davis Bacon wages.

3.01 PREVAILING WAGE RATES

- 3.01.01 The Contractor shall certify in writing and under oath to the Labor Commissioner the pay scale to be used by the Contractor and any Subcontractors. The provisions of this section shall not apply where the total cost of all work to be performed by ALL Contractors and Subcontractors in connection with new construction of any public works project is less than FOUR HUNDRED thousand dollars or where the total cost of all work to be performed by ALL Contractors and Subcontractors in connection with any remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project is less than ONE HUNDRED thousand dollars. The Contractor shall fully comply with all provisions of Connecticut General Statutes (CGS) 31-53 and shall be subject to such sanctions mandated for violations of said Public Act.
- 3.01.02 The wages paid on an hourly basis to any mechanic, laborer or workman employed upon the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such employee to any employee welfare fund, as defined in CGS 31-53 shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the Town in which such public works project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such employees to any such employee welfare fund shall pay to each employee as part of his wages the amount of payment or contribution for his classification on each pay day.
- 3.01.03 The contractor shall not be paid in accordance with the payment provisions of these Contract Bidding Documents unless the contractor is in full compliance with the mandates of CGS 31-53.
- 3.01.04 Bidders are further advised that if the initial consideration due and payable pursuant to the Contract exceeds the mandatory limits at which prevailing wages rates are required, then the contractor and any subcontractors shall pay the appropriate prevailing wages retroactive to the date of commencement of work on the project. The contractor shall not receive any additional compensation from the Owner as a result of an occurrence of the aforementioned event.

NOTICE ON EQUAL ACCESS
Regardless of Sexual Orientation,
Gender Identity, or Marital Status for
HUD's Community Planning and Development Programs

The Town of West Hartford receives funding from the U.S. Department of Housing and Urban Department's (HUD) Office of Community Planning and Development (CPD) and MUST comply with the following REQUIREMENTS:

- Determine your eligibility for assistance regardless of your sexual orientation, gender identity, or marital status, and must not discriminate against you because you do not conform to gender or sex stereotypes (i.e., because of your gender identity);
- Grant you equal access to CPD programs or facilities consistent with your gender identity, and provide your family with equal access;
- MUST NOT ask you to provide anatomical information or documentary (like your ID), physical, or medical evidence of your gender identity; and
- Take non-discriminatory steps when necessary and appropriate to address privacy concerns raised by any residents or occupants, including you.

If you think this program has violated any of these requirements, including any denial of services or benefits, **contact your local HUD office for assistance with alleged violations of HUD program regulations. Local offices can be found at:**

http://portal.hud.gov/hudportal/HUD?src=/program_offices/field_policy_mgt/localoffices

If you believe you have experienced housing discrimination because of race, color, religion, national origin, disability, or sex, including discrimination because of gender identity, contact 1-800-669-9777 or file a written complaint with HUD at: www.hud.gov "file a discrimination complaint". Persons who are deaf, hard of hearing, or have speech impairments may file a complaint via TTY by calling the Federal Information Relay Service at (800) 877-8339.

To better understand HUD's requirements, the following definitions apply:

- **Sexual orientation** means one's emotional or physical attraction to the same and/or opposite sex (e.g. homosexuality, heterosexuality, or bisexuality).
- **Gender identity** means the gender with which a person identifies, regardless of the sex assigned to that person at birth and regardless of the person's perceived gender identity.
- **Perceived gender identity** means the gender with which a person is perceived to identify based on that person's appearance, behavior, expression, other gender related characteristics, or sex assigned to the individual at birth or identified in documents.

Federal Labor Standards Provisions

U.S. Department of Housing and Urban Development Office of Labor Relations

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part

of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been

communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5 (a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who

is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by

the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) **Equal employment opportunity.** The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be

awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) **Withholding for unpaid wages and liquidated damages.** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

PLEASE SUBMIT WITH BID

SECTION 00302

- 1. Certification of Non Segregated Facilities**
- 2. Certification of Bidder Regarding Equal Employment Opportunity**
- 3. Certification of Proposed Subcontractor(s) Regarding Equal Employment Opportunity (if applicable)**
- 4. Non-Collusion Affidavit of Prime Bidder**
- 5. Non-Collusion Affidavit of Subcontractor (if applicable)**
- 6. Affirmative Action Plan (Each government contractor with 50 or more employees and \$50,000.00 or more in government contracts is required to develop a written affirmative action program (AAP) for each of its establishments).**
 - a. Instruction for filling out an affirmative action plan (if required)**
 - b. Section 3 requirements**

PLEASE SUBMIT WITH BID

CERTIFICATION OF NON-SEGREGATED FACILITIES

The Bidder certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The bidder certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The bidder agrees that a breach of this certification will be a violation of the Equal Opportunity clause in any contract resulting from acceptance of this bid. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. The bidder agrees that (except where he has obtained identical certification from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certifications in his files.

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

Date: _____

By: _____

Official Address: _____

**CERTIFICATION OF BIDDER REGARDING
EQUAL EMPLOYMENT OPPORTUNITY****INSTRUCTIONS**

This certification is required pursuant to Executive Order 11246 (30 F.R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions. Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after bid opening. No contract shall be awarded unless such report is submitted.

CERTIFICATION BY BIDDER

Bidder's Name: _____

Address and Zip Code: _____

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.
Yes ☐ No ☐ (If yes, identify the most recent contract.)
2. Compliance reports were required to be filed in connection with such contract or subcontract.
Yes ☐ No ☐ (If yes, identify the most recent contract.)
3. Bidder has filed all compliance reports due under applicable instructions, including SF-100. Yes ☐ No ☐ None required ☐
4. If answer to item 3 is "No," please explain in detail on reverse side of the certification.

Certification - The information above is true and complete to the best of my knowledge and belief.

Name and Title of Signer (Please type or print)

Signature

Date

**CERTIFICATION BY PROPOSED SUBCONTRACTOR REGARDING EQUAL
EMPLOYMENT OPPORTUNITY**

(Name of Prime Contractor)

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246 (30F.R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clauses and, if so, whether it has filed all compliance reports under applicable instructions.

Where the certification indicates that the subcontractor has not filed a compliance report due under applicable instructions, such subcontractor shall be required to submit a compliance report before the owner approves the subcontract or permits were to begin under the subcontract.

SUBCONTRACTOR'S CERTIFICATION

Subcontractor's Name: _____

Address: _____

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause. Yes _____ No _____
2. Compliance reports are required to be filed in connection with such contract or subcontract. Yes _____ No _____
3. Bidder has filed all compliance reports due under applicable instructions, including SF-100. Yes _____ No _____ None Required _____
4. If the answer to item 3 is "no" please explain in detail on reverse side of the certification.

Certification - the information above is true and complete to the best of my knowledge and belief.

Name and Title of Signer (Please type or print)

Signature

Date

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of) Connecticut

County of) Hartford

_____, being first duly sworn, deposes and says that:

1. He/She is _____ of _____ the Bidder that has submitted the attached Bid;
2. He/She is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Town of West Hartford, owner, or any person interested in the proposed contract.
5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

Signed

(Title)

Subscribed and sworn to before me this _____ day of _____, 2011.

_____ My Commission expires: _____
(Title)

NON-COLLUSION AFFIDAVIT OF SUBCONTRACTOR

State of) Connecticut

County of) Hartford

_____, being first duly sworn, deposes and says that:

1. He/She is _____ of _____, hereinafter referred to as the "Subcontractor"; He is fully informed respecting the preparation and contents of the Subcontractor's Proposal submitted by the Subcontractor to _____, the Contractor for certain work in connection with the _____ contract pertaining to the Project in *West Hartford, Connecticut*:
2. Such Subcontractor's Proposal is genuine and is not a collusive or sham proposal;
3. Neither the Subcontractor nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Proposal in connection with such Contract, or has in any manner, directly or indirectly, sought by unlawful agreement or connivance with any other Bidder, firm or person to fix the price or prices on said Subcontractor's Proposal, or to fix an overhead, profit or cost element of the price or prices in said Subcontractor's Proposal, or to secure through collusion, conspiracy, connivance or unlawful agreement any advantage against the Town of West Hartford, Owner _____, or any person interested in the proposed Contract:
4. The price or prices quoted in the Subcontractor's Proposal attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

Signed

Title

Subscribed and sworn to before me this _____ day of _____, 2014.

Signed

Title

My Commission expires: _____

INSTRUCTIONS FOR FILING AN AFFIRMATIVE ACTION PLAN

1. DIRECTION OF ACTION ACTIVITY

The "Plan" is designed to include in the workforce groups from the Labor Market Area, PMSA including Whites, Blacks, Spanish-Americans, Orientals, American Indians and other groups which have been discriminated against on the basis of Race, Color, Religion, Sex or National Origin.

The Program includes all employment activities, including but not limited to hiring, firing, promotion, compensation, and other terms privileges and conditions of employment.

The Program should also provide for upward mobility for those individuals who have because of Race, Color, Religion, Sex or National Origin been relegated to low paying jobs.

2. EQUAL EMPLOYMENT OFFICER

This person must be sensitive to varied ways in which discrimination limits job opportunities and be committed to program goals and have sufficient status and ability to work with others in the company. He should have direct access to the Chief Executive.

This person will be responsible for implementation and monitoring of this plan.

3. RECRUITMENT EFFORTS

a. Advertising

Newspapers - All advertisements shall include the use of the Equal Opportunity slogan, and all ads depicting persons shall depict persons of majority and minority groups.

Copies of all advertising material should be kept on file by the applicant to show how the Affirmative Action Plan has been implemented.

(1) Communication Media

Describe use of communications media, stating name of newspaper, radio or TV stations, identifying as to whether Majority, Minority or both in circulation or audience and stating the approximate frequency and size/time of ad to be placed.

b. Community / Minority Organizations

In smaller communities where there are no formal communications media in the minority community, special outreach efforts must depend upon community contacts.

Name community groups whom you expect to contact, give racial/ethnic identification of each, and state the nature of anticipated contact (mail or visit) and approximate frequency of contact. Enclose copies of any letters to be sent.

Strong contact can be made by meeting the leader of the group. Churches, social, civic and fraternal organizations and labor unions are useful. Small businesses such as barber shops, beauty parlors, and shoe repair shops may be utilized for distribution of brochures and other material. Personnel departments of major employers such as industrial plants or local, state or federal government agencies may help disseminate housing information.

Other - Specify colleges, high schools, employment agencies to be contacted and method.

4. INTERNAL DISSEMINATION

All staff, professional and clerical should be instructed in writing as well as orally that it is the policy of the applicant to obey all applicable Equal Employment Laws, to refrain from discriminating regarding any application for employment on the basis of Race, color, Religion, Sex or National Origin, and affirmatively promote Equal Employment. Each member of the staff should be furnished a copy of Executive Order 11246, Title VII, 1964 Civil Rights Act (as amended 1972), the staff should also be aware of all applicable State Laws, and Local Ordinances.

- a. Training sessions - specify who will be involved and how often sessions will be held.
- b. Training format - copy instructions given to all employees.

- c. Materials posted - describe what materials will be posted, and where they will be posted.

5. UNIONS/SUBCONTRACTORS/VENDORS (NOT APPLICABLE TO AGENCIES)

To insure this Affirmative Action Plan remains credible requires the assistance of Unions/Subcontractors/Vendors used. They must be knowledgeable of your intent to comply with the Law, and your Company/Agency position.

- a. Specify - List by Company those Subcontractors/Vendors you plan to use. If they are Minority owned (51%) so specify.
- b. Communication - List method and type of communications forwarded that implements this plan.
- c. If you are requiring an Affirmative Action Plan from your Subcontractors / Vendors, indicate who has complied and what dollar amount you have set. The Federal requirement are that each government contractor with 50 or more employees and \$50,000.00 or more in government contracts is required to develop a written affirmative action program (AAP) for each of its establishments. This aspect of the plan indicates outreach and commitment to the theme of Equal Opportunity.

6. PRESENT STAFF ANALYSIS

This is the first step toward defining your specific affirmative action goals. This format indicates your under-utilization and show areas where affirmative action must be taken in order to correct these negatives.

7. PROJECTIONS (GOALS AND TIMETABLES)

Any serious program requires setting measurable goals and reasonable timetables for achieving them. These goals have the objective of eliminating employment discrimination and effects of past discrimination. These goals should consider turnover, attrition, expansion or contraction, etc.

INSTRUCTIONS FOR FILING AN AFFIRMATIVE ACTION PLAN

AFFIRMATIVE ACTION PLAN

APPLICANT'S NAME	ADDRESS	ZIP CODE
------------------	---------	----------

NAME AND LOCATION OF PROJECT	TOTAL DOLLAR AMOUNT
------------------------------	---------------------

DIRECTION OF ACTION PLAN

Title VII of Civil Rights Act of 1964, as amended in 1972 prohibits discrimination because of Race, Color, Religion, Sex, National Origin in all employment practices including hiring, firing, promotion, compensation and other terms, privileges and condition of employment.

1. State what groups in your judgment are underutilized in your working staff presently:

2. Equal Opportunity Officer (Name, Address, Phone, Title)

3. Recruitment efforts (state name, address, phone, organization, contact person)

Newspapers (approximate frequency and use)

Radio/TV (approximate frequency and use)

Community/Minority Organizations (describe method of contact - phone, mail, visit)

Other

4. INTERNAL DISSEMINATION

Training sessions (who is involved, how often held)

Training format (Describe training given to all employees regarding implementation of Equal Employment Laws and this AAP)

Materials to be posted

5. UNIONS/SUB-CONTRACTORS/VENDORS USED

Specify: (If Minority, so indicate) (Include Dollar Amount)

Communications (Company's Equal Opportunity Policy forwarded)

Is there an AAP required of subcontractors/vendors? (If so, specify who compiled and dollar amount)

6. PRESENT STAFF ANALYSIS

An Affirmative Action Plan must be tailored to the circumstances which apply to the Applicant, Sponsor, or Contractor, their Locality, their Area Labor Market Conditions and all the operations (Federal and Non Federal) in which they are involved. (Chapter 14, Page 18 8000.6 Contract Compliance Handbook Executive Order 11246)

	WHITE	BLACK	SPANISH-SURNAMED	MALE	FEMALE
PROF					

ADMIN.

CLERICAL

WORKFORCE

JOURNEYMAN

HELPER

APPRENTICE

TRAINEE

7. PROJECTIONS – NUMBER AND PER CENT

MONTHLY PROJECTION

[illegible]

J - JOURNEYMAN

H - HELPER

AP - APPRENTICE

T - TRAINEE

8. List previous federal contracts involved in and success in achieving Equal Employment Opportunity.

9. Please describe other efforts planned as part of your outreach efforts not adequately covered by this form.

SECTION 3

135.20 ASSURANCE OF COMPLIANCE WITH REGULATIONS

The work to be performed under this contract is on a project assisted under a program providing direct federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of section 3 of the Housing and Urban Development Act of 1963 as amended, 12 U.S.C. 1701u. Section 3 requires that to the greatest extent feasible, opportunities for training and employment be given to lower income residents of the project area and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part by persons residing in the area of the project.

"Lower income residents of the project area" means any individual who resides within the area of a section 3 covered project and whose family income does not exceed 90 percent of the median income in the Standard Metropolitan Statistical Area (or the county if not within an PMSA) in which the section 3 covered project is located.

The parties to this contract will comply with the provisions of said section 3 and regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 CFR Part 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of this contract. The parties to this contract certify and agree that they are under no contractual or other disability, which would prevent them from complying with these requirements.

The contractor will send to each labor organization or representative of workers with which he has a collective bargaining agreement or other contract or understanding, if any, a notice advising the said labor organization or workman's representative of his commitments under this section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.

The contractor will include this section 3 clause in every subcontract for work in connection with the project and will at the direction of the applicant for or recipient and federal financial assistance, take appropriate action pursuant to the subcontract upon a finding that the subcontractor is in violation of regulations issued by the Secretary of Housing and Urban Development 24 CFR part 135. The contractor will not subcontract with any subcontractor where it has knowledge that the latter has been found in violation of regulations under 24 CFR part 135 and will not let any subcontract unless the subcontractor has first provided it with a preliminary statement on ability to comply with requirements on the regulations.

Compliance with provisions of section 3, the regulations set forth in 24 CFR part 135 and all applicable rules and orders of the department issued thereunder prior to the execution of the contract shall be a condition of the federal financial assistance provided to the project binding upon the applicant or requirement for such assistance, its successors and assigns. Failure to fulfill these requirements shall subject the applicant or recipient, its contractors, and assigns to those sanctions specified by the grant or loan agreement or contract through which federal assistance is provided and to such sanctions as are specified by 24 CFR part 135.

-prior to contract award the contractor shall be required to submit a preliminary statement of work force requirements (skilled, semi-skilled, unskilled labor and trainees by category) to the Town's Materials Administration Department.

-the contract shall identify efforts to be used in recruiting Section 3 lower-income residents to meet work force requirements.

-the contractor shall identify efforts to be used in utilizing small businesses located in the project area or owned in substantial part by persons residing in the project area.

-the contractor shall identify proposed subcontractors and businesses to be used and estimated related dollar values.

-upon request by the Town, the contractor shall submit information regarding the number of Section 3 lower-income residents employed and the dollar value associated with contracts and business with Section 3 area businesses.

CERTIFICATION

I, _____ of _____ (the Contractor),
certify that: I shall comply with all obligations stated in Section 3 above.

Signature

Date

"General Decision Number: CT20200021 01/24/2020

Superseded General Decision Number: CT20190021

State: Connecticut

Construction Type: Building

County: Hartford County in Connecticut.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2020
1	01/24/2020

ASBE0033-002 06/01/2019

Rates	Fringes
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HEAT & FROST INSULATOR (Includes Duct, Pipe and Mechanical Systems).....	\$ 40.21	30.99
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* BRCT0001-001 01/06/2020

Rates	Fringes
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BRICKLAYER.....	\$ 35.71	33.31
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BRCT0001-002 01/07/2019

Rates	Fringes
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BRICK POINTER/CAULKER/CLEANER....	\$ 34.72	32.55
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* BRCT0001-005 01/06/2020

	Rates	Fringes
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CEMENT MASON/CONCRETE FINISHER...	\$ 35.71	33.31
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 CARP0326-024 05/06/2019

	Rates	Fringes
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FLOOR LAYER: Carpet Only.....	\$ 33.53	25.66
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 CARP0326-025 05/06/2019

	Rates	Fringes
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FLOOR LAYER: Hardwood Floors Only.....	\$ 33.53	25.66
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 CARP0326-027 05/06/2019

	Rates	Fringes
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CARPENTER (Scaffold Builder).....	\$ 33.53	25.66
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 CARP0326-028 05/06/2019

	Rates	Fringes
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CARPENTER (Includes Acoustical Ceiling Installation, Drywall Hanging, Form Work, and Metal Stud Installation).....	\$ 33.53	25.66
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 ELEC0035-014 06/01/2018

	Rates	Fringes
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ELECTRICIAN (Including Low Voltage Wiring).....	\$ 40.00	3%+25.97
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 ELEV0091-002 01/01/2019

	Rates	Fringes
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ELEVATOR MECHANIC.....	\$ 53.37	33.705+a+b
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 ENGI0478-004 04/07/2019

	Rates	Fringes
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POWER EQUIPMENT OPERATOR (Backhoe/Excavator/Trackhoe).....	\$ 39.88	24.80
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 ENGI0478-005 04/07/2019

	Rates	Fringes
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POWER EQUIPMENT OPERATOR (Bulldozer).....	\$ 39.88	24.80
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 ENGI0478-012 04/07/2019

	Rates	Fringes
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POWER EQUIPMENT OPERATOR

(Crane).....\$ 40.97 24.80

ENGI0478-016 04/07/2019

Rates Fringes

POWER EQUIPMENT OPERATOR

(Loader - 7 cubic yards or
over).....\$ 40.97 24.80-----
IRON0015-010 06/03/2019

Rates Fringes

IRONWORKER (Reinforcing,

Structural, Ornamental).....\$ 36.67 35.77

LAB00230-001 04/07/2019

Rates Fringes

LABORER

Common or General.....\$ 30.75 20.84

Mason Tender-

Cement/Concrete.....\$ 31.25 20.84

PAIN0011-014 06/01/2019

Rates Fringes

GLAZIER.....\$ 38.18 21.80

PAIN0011-021 06/01/2019

Rates Fringes

PAINTER (Brush and Roller).....\$ 34.62 21.80

PAIN0011-023 06/01/2019

Rates Fringes

PAINTER (Drywall

Finisher/Taper).....\$ 35.37 21.80

PLUM0777-001 06/01/2018

Rates Fringes

PLUMBER.....\$ 42.62 31.21

PLUM0777-003 06/01/2018

Rates Fringes

PIPEFITTER.....\$ 42.62 31.21

PLUM0777-004 06/01/2018

Rates Fringes

PLUMBER (HVAC Pipe

Installation).....\$ 42.62 31.21

ROOF0009-001 06/01/2019

	Rates	Fringes
ROOFER.....	\$ 37.60	20.65

SFCT0669-002 04/01/2019

	Rates	Fringes
SPRINKLER FITTER.....	\$ 45.57	24.33

SHEE0040-001 07/01/2019

	Rates	Fringes
SHEET METAL WORKER (Including HVAC Unit Installation).....	\$ 37.98	38.31

SHEE0040-002 07/01/2019

	Rates	Fringes
SHEET METAL WORKER (Metal Flashing and HVAC Duct Installation Only).....	\$ 37.98	38.31

SHEE0040-008 07/01/2019

	Rates	Fringes
SHEET METAL WORKER (Metal Roofs Installation).....	\$ 37.98	38.31

TEAM0677-001 04/07/2019

	Rates	Fringes
TRUCK DRIVER (Dump Truck).....	\$ 29.72	24.52

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within

the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in

the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

AIA® Document A101™ – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the day of in the year
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

Town of West Hartford
50 South Main Street
West Hartford, CT 06107

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

BID#200015 NEW RESTROOM BUILDING AT EISENHOWER PARK
22 Sheep Hill Road
West Hartford, CT

The Architect:
(Name, legal status, address and other information)

Bostwick Architects LLC
56 Arbor Street
Hartford, CT 06106

The Structural Engineer:
(Name, legal status, address and other information)

Toce Structural Engineering LLC
1755 Meriden Waterbury Tnpk, Unit 6
Milldale, CT 06467

The Engineer:
(Name, legal status, address and other information)

RZ Design Associates Inc
750 Old Main Street, Suite 202

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101™–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201™–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

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User Notes:

(3B9ADA48)



The Owner and Contractor agree as follows.

TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

☒ The date of this Agreement.

☐ A date set forth in a notice to proceed issued by the Owner.

☐ Established as follows:

(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

☐ Not later than () calendar days from the date of commencement of the Work.

☒ By the following date: June 20, 2020

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date
<input type="text"/>	<input type="text"/>

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be (\$), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price
<u>Base Bid</u>	<input type="text"/>

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.

(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance
<input type="text"/>	<input type="text"/>	<input type="text"/>

§ 4.3 Allowances, if any, included in the Contract Sum:

(Identify each allowance.)

Item	Price
<input type="text"/>	<input type="text"/>

§ 4.4 Unit prices, if any:

(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
<input type="text"/>	<input type="text"/>	<input type="text"/>

§ 4.5 Liquidated damages, if any:

(Insert terms and conditions for liquidated damages, if any.)

Liquidated Damages in the amount of \$300.00 (Three Hundred Dollars) per calendar day shall be assessed for the failure to achieve Substantial Completion of the work not later than Commencement Date as stated above and Final Completion of the Work also stated above.

§ 4.6 Other:

(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the first day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the first Friday after the Fifteenth day of the same month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than fifteen (15) days after the Architect receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document ~~A201™-2017~~, ~~A201™-2007~~, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work; Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of Five percent (5%).
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified, less retainage of Five percent (5%);

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document ~~A201-2017~~; ~~A201-2007~~;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document ~~A201-2017~~; ~~A201-2007~~; and

.5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

§ 5.1.7.1.1 The following items are not subject to retainage:

(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:

(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:

(Insert any other conditions for release of retainage upon Substantial Completion.)

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document ~~A201-2017~~, A201-2007.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1** the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document ~~A201-2017~~, A201-2007, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2** a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

0.00 % per annum

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document ~~A201-2017~~, ~~A201-2007~~, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document ~~A201-2017~~, ~~A201-2007~~, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

☒ Arbitration pursuant to Section 15.4 of AIA Document ~~A201-2017~~ ~~A201-2007~~

☐ Litigation in a court of competent jurisdiction

☐ Other *(Specify)*

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction ~~jurisdiction in Hartford County, Connecticut.~~

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document ~~A201-2017~~, ~~A201-2007~~.

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document ~~A201-2017~~, ~~A201-2007~~, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document ~~A201-2017~~, ~~A201-2007~~.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document ~~A201-2017~~, ~~A201-2007~~ or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:

(Name, address, email address, and other information)

Mike Longo, Facilities Manager

Town of West Hartford

50 South Main Street

West Hartford, CT 06107

860-561-7927

§ 8.3 The Contractor's representative:
(Name, address, email address, and other information)

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™-2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201-2017, A201-2007, may be given in accordance with AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203-2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

§ 8.7 Other provisions:

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- 1 AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor
- 2 AIA Document A101™-2017, Exhibit A, Insurance and Bonds
- 3 AIA Document A201™-2017, A201™-2007, General Conditions of the Contract for Construction
- 4 AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013 incorporated into this Agreement.)

5 3 Drawings

Number

Title

Date

6 COVER SHEET

ARCHITECTURAL

A - 0.1 INFORMATION SHEET, MOUNTING HEIGHTS, SYMBOLS, DRAWING LIST

A - 1.0 FLOOR PLAN, EXTERIOR ELEVATIONS, SECTION AND INTERIOR ELEVATIONS

A - 2.0 DOOR AND FRAME DETAILS, WALL SECTION

STRUCTURAL

S - 1.0 FOUNDATION PLAN, ROOF FRAMING PLAN, DETAILS & NOTES

S - 1.1 GENERAL NOTES, SECTIONS & DETAILS

S - 1.2 SECTIONS AND DETAILS

MECHANICAL

M - 1.0 MECHANICAL PLANS

M - 2.0 MECHANICAL SPECIFICATIONS

PLUMBING

P - 1.0 PLUMBING PLANS

ELECTRICAL

E - 0.0 ELECTRICAL SCHEDULE

E - 1.0 ELECTRICAL PLANS

E - 2.0 ELECTRICAL SPECIFICATIONS

FIRE PROTECTION NOT APPLICABLE

.4 Specifications are those contained in the Project Specifications Document Bid#200015 and are as in Section 9.1.8 below.

Section	Title	Date	Pages
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.7—DIVISION 1 GENERAL REQUIREMENTS

Section 01000 SPECIFICATION FORMAT

Section 01010 SUMMARY OF WORK

Section 01019 CONTRACT CONSIDERATIONS

Section 01026 APPLICATION FOR PAYMENT

Section 01039 COORDINATION AND MEETINGS

Section 01045 CUTTING AND PATCHING

Section 01060 REGULATORY REQUIREMENTS

Section 01090 REFERENCES

Section 01120 ALTERNATE PROJECT PROCEDURES

Section 01200 PROJECT MEETINGS

Section 01300 SUBMITTALS

Section 01340 SHOP DRAWINGS AND SAMPLES

Section 01400 QUALITY CONTROL

Section 01500 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

Section 01600 MATERIALS AND EQUIPMENT

Section 01630 PRODUCT OPTIONS AND SUBSTITUTIONS

Section 01700 CONTRACT CLOSEOUT

Section 01720 PROJECT RECORD

Section 01740 GUARANTEES, WARRANTIES, BONDS & MAINTENANCE CONTRACTS

Section 01800 GENERAL STANDARDS

DIVISION 2 SITEWORK - NOT USED

DIVISION 3 CONCRETE - ON DRAWINGS

DIVISION 4 MASONRY

Section 04012 MASONRY CLEANING

Section 04051 MORTAR AND MASONRY GROUT

Section 04220 CONCRETE UNIT MASONRY

DIVISION 5 METAL

Section 05051 SHOP APPLIED COATINGS FOR METAL

DIVISION 6 WOOD AND PLASTIC

Section 06100 ROUGH CARPENTRY

Section 06105 WOOD NAILERS AND BLOCKING

DIVISION 7 THERMAL AND MOISTURE PROTECTION
Section 07311 FIBERGLASS ASPHALT SHINGLES
Section 07620 SHEET METAL AND FLASHING TRIM
Section 07920 JOINT SEALERS
DIVISION 8 DOORS AND WINDOWS
Section 08110 STEEL DOORS AND FRAMES
Section 08311 ACCESS DOORS
Section 08710 DOOR HARDWARE

DIVISION 9 FINISHES
Section 09211 GYPSUM BOARD SYSTEMS
Section 09221 FURRING FOR GYPSUM BOARD CEILINGS
Section 09900 PAINTING

DIVISION 10 SPECIALTIES
Section 10200 LOUVERS AND VENTS
Section 10284 ELECTRIC HAIR DRYERS (NOTED ON DRAWINGS)
Section 10425 SIGNAGE
Section 10800 TOILET AND BATH ACCESSORIES
DIVISION 11 EQUIPMENT - NOT USED
DIVISION 12 FURNISHING - NOT USED
DIVISION 13 SPECIAL CONSTRUCTION - NOT USED
DIVISION 14 CONVEYING SYSTEMS - NOT USED
DIVISION 15 MECHANICAL - ON DRAWINGS
DIVISION 16 ELECTRICAL - ON DRAWINGS

.5 Addenda, if any:

Number	Date	Pages

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.8—.6 Other Exhibits:

(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

☐ AIA Document E204™-2017, Sustainable Projects Exhibit, dated as indicated below:
 (Insert the date of the E204-2017 incorporated into this Agreement.)

☐ The Sustainability Plan:

Title	Date	Pages

☐ Supplementary and other Conditions of the ~~Contract~~ Contract
 are those contained in the Project Specifications Document Bid#200015 and are as follows:

Document	Title	Date	Pages

.9—**INSTRUCTIONS TO BIDDERS**
00101 PROJECT INFORMATION PAGE
00102 TABLE OF CONTENTS

00103 PROJECT NARRATIVE

00104 LIST OF DRAWINGS

00105 LOCATION MAP

00106 WORK RULES

00107 NOISE ORDINANCE

BIDDING REQUIREMENTS AND FORMS

00201 INVITATION TO BID

00202 INSTRUCTIONS TO BIDDERS - AIA DOCUMENT A701-1997

00203 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

00204 BID FORMS

00205 SAMPLE AGREEMENT FORM

LABOR REQUIREMENTS

00303 CONTRACT LABOR RATES

GENERAL CONDITIONS

00401 GENERAL CONDITIONS - AIA DOCUMENT A201-2007

00402 SUPPLEMENTARY GENERAL CONDITIONS

7. Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

Contractor's Bid Response attached herein

This Agreement entered into as of the day and year first written above.

Town of West Hartford

OWNER (Signature)

Peter Privitera, Purchasing Agent

(Printed name and title)

CONTRACTOR (Signature)

(Printed name and title)



AIA® Document A201™ – 2007

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

BID#200015 NEW RESTROOM BUILDING AT EISENHOWER PARK
22 Sheep Hill Road
West Hartford, CT

THE OWNER:

(Name, legal status and address)

Town of West Hartford
50 South Main Street
West Hartford, CT 06107

THE ARCHITECT:

(Name, legal status and address)

Bostwick Architects LLC
56 Arbor Street
Hartford, CT 06106

THE STRUCTURAL ENGINEER:

(Name, legal status and address)

Toce Structural Engineering LLC
1755 Meriden Waterbury Tnpk, Unit 6
Milldale, CT 06467

THE ENGINEER:

(Name, legal status and address)

RZ Design Associates Inc
750 Old Main Street, Suite 202
Rocky Hill, CT 06067

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

§ 1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

§ 1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 CAPITALIZATION

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or the

portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.2.5 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 WARRANTY

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.6 TAXES

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 **Concealed or Unknown Conditions.** If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall

continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required

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submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop

Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a

party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed.

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However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 SUBCONTRACTUAL RELATIONS

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
- .5 Additional costs of supervision and field office personnel directly attributable to the change.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 MINOR CHANGES IN THE WORK

The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.2 SCHEDULE OF VALUES

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon

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compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the

Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract

Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in

whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional

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insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 11.2 OWNER'S LIABILITY INSURANCE

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 11.3 PROPERTY INSURANCE

§ 11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

§ 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.3.2 BOILER AND MACHINERY INSURANCE

The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

§ 11.3.3 LOSS OF USE INSURANCE

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

§ 11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

§ 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

§ 11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

§ 11.3.7 WAIVERS OF SUBROGATION

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 11.3.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

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§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be

sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.6 INTEREST

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

§ 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

Init.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

§ 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

§ 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

§ 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 INITIAL DECISION

§ 15.2.1 Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

Init.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 MEDIATION

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 ARBITRATION

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 CONSOLIDATION OR JOINDER

§ 15.4.4.1 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.

GENERAL

A. RELATED DOCUMENTS

AIA Document A 201 "General Conditions of the Contract for Construction", (Sixteenth Edition, Copyright 2007, The American Institute of Architects, Articles 1 through 15) and the Town of West Hartford's Supplementary General Conditions (Section 00402 Articles 1-15) are bound herein, and are hereby made a part of the Contract Bidding Documents and shall apply to all Contractors and Subcontractors.

B. AMENDMENTS TO THE GENERAL CONDITIONS

- a. The Supplementary General Conditions include:
 - 1. Any and all revisions to, deletions from, replacement of, and additions to portions of the AIA General Conditions, Articles 1 through 15.
 - 2. Such additional articles beyond Article 15 as may be included herein.
- b. Certain articles of the AIA General Conditions, or portions thereof, are revised by, are deleted, are replaced by, or are supplemented by the requirements of the following Supplementary Conditions. Such revisions, deletions, replacements, or additions shall take precedence over the AIA General Conditions.
- c. Where any such Article is revised, deleted, or replaced, the provisions of such Article not so specifically revised, deleted or replaced shall remain in effect.
- d. The following paragraphs are numbered in sequence corresponding to those of the General Conditions. Revised paragraphs and clauses have the same numerical designations occurring in the General Conditions. Additions to paragraphs, subparagraphs and clauses are numbered in sequence.

ARTICLE 1 – GENERAL PROVISIONS

- 1.1.1 Delete the word "not" on line 7 so that the sentence begins "The Contract Documents do include."
- 1.1.3 Add the following words after the word "obligations" in line 3:

or to be provided by Subcontractors, material suppliers, or any other entity for whom the Contractor is responsible under or pursuant to the Contract Documents.
- 1.2.4 Add new subparagraph 1.2.4 as follows:

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In case of any conflict or inconsistency among the Contract Documents, the Architect's decision shall govern. If there is any inconsistency in the Drawings, or between the Drawings and the Specifications, unless otherwise ordered in writing by the Architect or the Owner, the Contractor shall provide the better quality of, or the greater quantity of, work or materials.

1.2.5 Add new subparagraph 1.2.5 as follows:

Where a typical or representative detail is shown on the Drawings, such detail shall constitute the standard of workmanship and materials throughout corresponding portions of the Work. Where necessary, the Contractor shall adopt such detail for use in said corresponding portions of the Work in a manner that is satisfactory to the Architect.

1.5.1 Add the following after the first sentence:

Such drawings, specifications, other documents and copies thereof are and shall remain the joint property of the Architect and Owner.

ARTICLE 2 - OWNER

2.2.1 Delete third and forth sentences.

2.2.2 Add the following at the end of 2.2.2 "unless otherwise provided in the contract documents."

2.2.3 Delete the words "and utility locations" on line 1.

2.2.4 Delete the second sentence of 2.2.4.

2.2.5 Delete subparagraph 2.2.5 in its' entirety and substitute with the following:

The Contractor will be furnished up to fifteen (15) sets of the Contract Bidding Documents at no charge.

2.3 Change subparagraph 2.3 as follows:

Delete the word "repeatedly" in line 2.
Add the following at the end of 2.3:

The Owner's right to order the Contractor to stop the Work shall not relieve the Contractor of any of his responsibilities and obligations under or pursuant to the Contract Documents.

2.5 Add new paragraph 2.5 as follows:

2.5 - Additional Rights

The rights stated in Article 2 shall be in addition to and shall not be in limitation of any other rights of the Owner granted in the Contract Documents or at law or in equity.

ARTICLE 3 - CONTRACTOR

3.2.2 Delete subparagraph 3.2.2 in its' entirety and substitute with the following:

The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the Owner pursuant to subparagraph 2.2.3 and 3.2.3 and shall at once report to the Architect errors, inconsistencies or omissions discovered, or any variance from applicable laws, statutes, ordinances, building codes, rules, regulations or any lawful orders of any governmental body, or public or quasi-public authority. The Contractor shall not be liable to the Owner or Architect for damage resulting from errors, inconsistencies or omissions in the Contract Documents unless the Contractor recognized or should have recognized such error, inconsistency or omission and failed to report it to the Architect. If the Contractor performs any construction activity knowing it involves a recognized error, inconsistency or omission in the Contract Documents without such notice to the Architect, the Contractor shall assume responsibility for such performance and shall bear an appropriate amount of the attributable costs for correction.

3.2.3 Delete subparagraph 3.2.3 in its' entirety and substitute with the following:

The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the Architect at once. After reporting to the Architect any error, inconsistency or omission the Contractor may discover in the Contract Documents, the Contractor shall not proceed with any work so affected without the Architect's written modifications to the Contract Documents.

3.2.4 Delete subparagraph 3.2.4 in its' entirety and substitute with the following:

The Contractor shall fully comply, or assure full compliance by Subcontractors or others under his direction, with Connecticut General Statutes Section 16-345, et seq. ("Call Before You Dig") and the regulations pertaining thereto. The Contractor shall be responsible to make certain of the exact location of the public and private mains, ducts, poles and utility services prior to excavation. The utility mains, ducts,

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poles and services in the construction area where referred to on the Project plans or elsewhere in the Contract Documents are at the approximate locations furnished by various Utilities concerned. These locations are subject to possible errors in the source of the information and also errors in transcription. Connecticut General Statutes Section 16-349, as amended, makes it mandatory to notify Utilities of any proposed excavation, discharge of explosives, or demolition within the purview of Connecticut General Statutes Section 16-345, et seq. The Contractor shall call 1-800-922-4455 (toll free), 7:00 A.M. to 6:00 P.M., Monday through Friday, at least forty-eight hours prior to beginning the excavation, discharge of explosives, or demolition. The Owner shall be notified in a similar manner. This "Call Before You Dig" service is provided by the Utility companies. Once the call is made, it is the utilities' responsibility to analyze the site and identify and mark their underground facilities. Privately or Town-owned utility mains, ducts, poles and services may be located in the construction area and the Contractor shall contact the Architect to verify their existence and location.

- 3.3.1 Delete the last sentence of subparagraph 3.3.1 and add the following:

Should the Contractor fail to perform his work to the satisfaction of the Architect and Owner, the Architect and Owner have the right to order that all work must stop until the work is rectified.

- 3.3.4 Add new subparagraph 3.3.4 as follows:

The Contractor will be required to attend weekly Project Meetings from the time the Agreement is executed until Final Acceptance.

- 3.4.4 Add new subparagraph 3.4.4 as follows:

The Contractor is encouraged to use local labor where feasible, but not when it is at the expense of poor workmanship and/or higher costs. The Contractor shall not discriminate or permit discrimination in employment or in the award of sub-contracts or in the selection of materials suppliers, in any manner prohibited by the laws and regulations of the United States, the State of Connecticut or the Town of West Hartford.

- 3.5 Add the words "or Owner" after the word "Architect" in line 8.

- 3.6 Delete subparagraph 3.6 in its' entirety and substitute the following:

No amount shall be included in the Bid for Connecticut Sales or Service Taxes or for Federal Excise Tax on materials or supplies purchased for this project. If applicable, the owner shall provide tax exempt documentation for the contractor's records.

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3.7.2 Add the following sentence: A copy of the State license for general and major Subcontractors issued in accordance with C.G.S Section 20-341gg shall be furnished to the Owner upon request.

3.7.4 Add the following before the word "If" on line 1: "Except as in regards to claims relating to hazardous materials which are discussed in Article 3.7.8.."

Line 6, place a period after disturbed and delete rest of sentence.

If the Contractor performs work contrary to laws, statutes, ordinances, building codes, and rules and regulations, the Contractor shall assume responsibility for such work and shall bear the costs attributable to correction.

3.7.6 Add new subparagraph 3.7.6 as follows:

The requirements of subparagraphs preceding do not waive the Contractor's responsibility of complying with the requirements of the contract documents, when such regulations and requirements exceed those of any laws, ordinances, rules, regulations, and orders of any public authority bearing on the work.

3.7.7 Add new subparagraph 3.7.7 as follows:

The Town of West Hartford Building Permit Fee will be waived, however, the General Contractor must apply for the Building Permit, and in all other ways comply with procedures of the office of the Building Official for the Town of West Hartford.

3.7.8 Add new subparagraph 3.7.8 as follows:

The Owner and Architect shall bear no responsibility to the Contractor, or sub-contractor(s) for any delay damages claimed to have resulted from activities claimed to relate to the detection, abatement, or handling of hazardous materials known to exist or subsequently discovered upon the premises. The sole remedy of the Contractor under such circumstances shall be an appropriate extension of contract completion time. No damages shall be paid by the Architect or Owner, their agents, servants or independent Contractors as a result of any such claim.

3.12.10 Delete the word "properly" in line 9 and substitute the word "Connecticut".

3.17 Delete subparagraph 3.17 and substitute with the following:

The Contractor shall pay all royalties and license fees. The Contractor shall defend all suits or claims for infringement of any copyrights and patent rights and shall hold the Owner harmless from loss (including, but not limited to, attorneys' fees and any litigation expenses) unless a particular design, process or the product of a particular

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manufacturer or manufacturers is specified in the Contract Documents or where copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect; provided, however, that if the Contractor has reason to believe that the design, process or product specified is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless the Contractor promptly gives such information to the Architect and Owner.

- 3.18.1 Delete subparagraph 3.18.1 in its entirety and replace the original language with the attached Indemnification and Insurance Exhibit which shall be fully incorporated by reference into this Agreement:

ARTICLE 4 - ARCHITECT

- 4.1.2 Delete subparagraph 4.1.2 in its' entirety and substitute the following:

Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written agreement of the Owner and Architect. The Contractor shall be notified of such restriction, modification or extension in writing.

- 4.1.3 Delete the words "as to whom the Contractor makes no reasonable objection and".

ARTICLE 5 - SUB-CONTRACTORS

- 5.2.1 Delete the word "after" on the second line and substitute with the words "prior to" award.

- 5.2.3 Delete subparagraph 5.2.3 in its entirety and substitute the following:

If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If no suitable substitute is agreed upon, the Owner will allow the Contractor to withdraw its bid without penalty.

ARTICLE 6 - CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

- 6.1.1 Add the word "unreasonable" before the word "delay" in the last sentence, line 4.

- 6.1.4 Delete subparagraph 6.1.4 in its' entirety.

- 6.2.3 Delete the second sentence of subparagraph 6.2.3.

6.2.4 Delete the word "wrongfully" on line 1.

ARTICLE 7 - CHANGES IN THE WORK

7.3.3 Delete subparagraph 7.3.3.1 - 7.3.3.4 and substitute with the following:

- .1 Unit prices stated in the Contract Documents or subsequently agreed upon.
- .2 In the absence of unit prices, the mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation, to be determined as follows:
 - A. The cost of labor performed and material used by the Contractor with his own forces.
 - B. The cost of Worker's Compensation, Federal Social Security, and Connecticut Unemployment Compensation at established rates, actual additional cost of payment and performance bonds.
 - C. Actual cost of rental rates for equipment (exclusive of hand tools) employed and used directly on the work.
 - D. Fifteen percent (15%) of (A), (B), and (C) above mentioned for overhead, superintendence and profit. However, if the work to be performed results in a credit to the Owner, no percentage of overhead and profit will apply.
 - E. On work to be performed by a Subcontractor, the Contractor's allowance, for overhead superintendence and profit, is to be ten percent (10%) applied to total cost of Subcontractor's work, including his allowance as per paragraph G.
 - F. On any changes involving the Contractor, Subcontractor or any Contractor of theirs, their total cost and/or omissions shall be combined as one before the application of the percentage allowed for the Contractor's overhead, superintendence and profit in accordance with paragraph E above.
 - G. On work to be performed by a Subcontractor, the Subcontractor's allowance is to be fifteen percent (15%) for his overhead, superintendence and profit applied to paragraphs A, B, and C.

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- H. The Contractor, when performing the work under A, B and C above shall, when requested, promptly furnish in a form satisfactory to the Owner, itemized statements of the cost of the work so ordered, including but not limited to, certified payrolls and copies of accounts, bills and vouchers to substantiate the above estimates.

7.3.4 Delete the word "shall" in line 4 and substitute the word "may".

7.3.7 Delete subparagraph 7.3.7 and substitute with the following:

If the Contractor does not respond promptly or disagrees with the method of adjustment in the Contract Sum, the method and adjustment shall be determined by the Architect in accordance with subparagraph 7.3.3. Under subparagraph 7.3.3 the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data.

7.3.8 Add the following sentence at the beginning of subparagraph 7.3.8:

"Pending final determination of cost to the Owner, amounts not in dispute may be included in Application for Payment."

7.3.9 Delete subparagraph 7.3.9 in its' entirety and substitute the following:

"If the Owner and Contractor do not agree with the adjustment in Contract Time or the method for determining it, the adjustment or the method shall be referred to the Architect for determination."

ARTICLE 8 - TIME

8.2.1 Delete second sentence only and change to read as follows:

By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work and that he is capable of properly completing the Work within the Contract Time.

8.3.1 Delete the words "and arbitration" on line 4 and substitute with the words "or resolution of claims or disputes".

ARTICLE 9 – PAYMENTS AND COMPLETION

9.2 Add the words "and the Owner" after the word Architect on line 2 and add the words "or the Owner" after the word Architect on line 4.

9.2.1 Add subparagraph 9.2.1 as follows:

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The Schedule of Values to be submitted by the Contractor, will include, as a minimum, a separate line item for each Division of the Specifications. Any allowances called for in the Drawings and Specifications will be shown as a separate line item. Additional items to be listed may be required by the Architect.

9.3.1 Delete subparagraph 9.3.1 in its' entirety and substitute with the following:

Not later than the first day of each calendar month, the Contractor shall submit to the Architect an itemized Application for Payment for work performed during the previous month, notarized, supported by such data substantiating the Contractor's

right to payment as the Owner or the Architect may require, and reflecting retainage, if any, as provided elsewhere in the Contract Documents.

9.3.1.1 Delete 9.3.1.1 in its' entirety and substitute with the following:

In order to expedite monthly payments during the course of the project, the Contractor shall, no later than the first day of the month, review with the Architect and Owner a preliminary draft of the Application for Payment to assure agreement with the Contractor before final copies of the Application are typed and formally submitted. The Architect shall then review the Contractor's formal Application for Payment and certify in writing in accordance with Section 9.4, the total value of work done, including an allowance for the value of materials delivered and suitably stored at the site to the time of such estimate. The Owner shall retain five (5) percent of such estimated value until a maximum of five (5) percent of the Agreement sum has been retained, said retainage to be held by the Owner as part security for the fulfillment of the Agreement by the Contractor. Final payment, including the retainage, shall be due thirty (30) days after final completion of the work, provided the work be then fully completed and the Agreement fully performed.

9.3.3 Delete subparagraph 9.3.3 in its' entirety and substitute with the following:

The Contractor warrants that title to all work covered by an Application for Payment, except materials and equipment suitably stored on or off the site, will pass to the Owner no later than the time of payment. However, title to materials and equipment suitably stored on or off site shall not pass to the Owner until such time as said materials and equipment are properly installed by the Contractor even though payment for such materials and equipment may have been previously effected. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor,

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materials and equipment relating to the Work. This provision may not be explained, supplemented, or modified by a course of dealing, a usage of trade, a course of performance or other interpretation that may arise out of the commercial context in which this provision is used.

9.4.1 Delete subparagraph 9.4.1 in its' entirety and substitute with the following:

The Architect, will, not later than the seventh (7th) day of each calendar month, either issue and deliver to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determined is properly due, or notify the Contractor and Owner in writing the Architect's reasons for withholding a Certificate as provided in sub-paragraph 9.5.1.

9.4.3 Add new subparagraph 9.4.3 as follows:

If the Application for Payment discloses any problems, the Architect shall immediately bring such problems to the Owner's attention.

9.5.1 Delete the word "reasonably" in line 1; delete the words "in the Architect's opinion" in lines 2 and 8; delete the word "repeated" in sub-subparagraph 9.5.1.7.

9.5.2 Add the following to subparagraph 9.5.2:

The Owner shall not be deemed in default by reason of withholding payment while any of the above grounds remain uncured as stated in paragraph 9.5.1.

9.5.4 Add new subparagraph 9.5.4 as follows:

No interest is to be allowed or paid by the Owner upon any monies retained under the provisions of this Contract.

9.6.1 Delete subparagraph 9.6.1 in its' entirety and substitute with the following:

After the Architect has issued a Certificate for Payments, the Owner shall make payment to the Contractor not later than the first Friday after the 15th day of the calendar month during which the Application has been submitted. Delays in submitting the application for payment in accordance with subparagraph 9.3.1 above will result in a corresponding delay in payment.

9.7 Delete the word "seven" on lines 1, 2 and 4 and replace with the word "fourteen" on both lines. Delete the words "plus interest as provided for in the Contract Documents" on line 7.

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9.8.2 Change subparagraph 9.8.2 as follows:

In line 1, add the words "and Architect" after the word "Owner" and change the word "agrees" to "agree" in line 1. Add the words "and Owner" after the word "Architect" on line 3.

9.8.3 Insert the words "and Owner" after the word "Architect" on lines 1 and 6. Insert the words "and Owner's" after the word "Architect's" on line 2.

9.8.5 Delete subparagraph 9.8.5 in its' entirety and substitute the following:

"The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Architect, the Owner shall make payment reflecting adjustments in retainage, if any, for such work or portion thereof as provided in the Contract Documents."

9.10.1 Add the words "and Owner" on both lines 2 and 3 after the word "Architect".

9.10.2 Delete subparagraph 9.10.2 in its' entirety and substitute with the following:

Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect in a form satisfactory to the Owner (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days after written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) final prints for record drawing use marked by the Contractor with record information as set forth in the Contract Documents, (6) a final sworn statement from the Contractor duly executed and acknowledged showing all Subcontractors to be fully paid and similar sworn statements from Subcontractors and, where appropriate, from Sub-Subcontractors, (7) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor or Sub-Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, or is not bonded over as provided in the preceding sentence, the Contractor shall promptly

pay to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY

10.2.1.4 Add the following as new sub-subparagraph 10.2.1.4:

the environment, including, without limitation, air, water, land, including wetlands, and other natural resources, and plant and animal life of all types.

10.2.2 Delete subparagraph 10.2.2 in its' entirety and substitute with the following:

The Contractor shall give notices and comply with applicable laws (including, without limitation, the requirements of Connecticut General Statutes Section 31-40m relating to toxic substances and the requirements of the Occupational Safety and Health Act and the Construction Safety Act of 1969, as amended, and regulations and standards promulgated thereunder), ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or the environment or their protection from damage, injury, destruction, pollution or loss. Said laws, ordinances, rules, regulations, standards, and lawful orders are incorporated herein by reference.

10.2.2.1 Add new sub-subparagraph 10.2.2.1 as follows:

The Contractor shall be directly responsible for compliance therewith on the part of its agents, employees, materialmen and Subcontractors and shall directly receive and be responsible for all citations, assessments, fines or penalties which may be incurred by reason of its agents', employees', materialmen's or Subcontractors' failure to so comply.

10.2.4 Add the following to subparagraph 10.2.4:

The Contractor shall comply fully and require compliance with all applicable laws, including Connecticut General Statutes Sec. 16-345, et. seq., and the regulations promulgated thereunder, relating to discharge of explosives.

10.2.5 Add the number "10.2.1.4" after the number "10.2.1.3" on lines 2 and 5.

10.2.8 Delete the number "21" in line 4 and replace with the number "10".

10.2.9 Delete the number "21" in line 4 and replace with the number "10".

Add new subparagraph 10.2.9 as follows:

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The Contractor shall be responsible for the adequate strength and safety of all scaffolding, staging and hoisting equipment and for temporary shoring, bracing and tying.

10.2.10 Add new subparagraph 10.2.10 as follows:

The Contractor shall protect all streets, roads and sidewalks and shall make all necessary repairs at his own expense, and shall maintain these reasonably clean of dirt, mud or other debris that is due to the construction operation.

10.2.11 Add new subparagraph 10.2.11 as follows:

It shall be the Contractor's responsibility to protect finished sidewalks and curbs against damage caused by trucks, etc., driving over them. If they are damaged they must be replaced by the Contractor without cost to the Owner.

10.2.12 Add new subparagraph 10.2.12 as follows:

The Contractor shall furnish approved hard hats, other personal protective equipment as required, approved first aid supplies, name of first aid attendant and a posted list of emergency facilities.

10.3.2 Delete subparagraph 10.3.2 in its' entirety and substitute with the following:

The Owner shall obtain the services of a licensed laboratory to verify the presence of absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to verify that it has been rendered harmless. When the material or substance has been rendered harmless, work in the affected area shall resume. The Contract Time may be extended appropriately.

10.3.3 Delete subparagraph 10.3.3 in its' entirety.

10.3.4 Insert a period after the word "Site" on line 2 and delete the rest of the paragraph.

10.3.6 Delete paragraph 10.3.6 in its' entirety.

ARTICLE 11 - INSURANCE AND BONDS

11.1.2 – 11.3.10 Delete subparagraphs 11.1.2 through 11.3.10 in their entirety and replace them with the attached Indemnification and Insurance Exhibit which shall be fully incorporated by reference into this Agreement.

11.4.3 Add new subparagraph 11.4.3 as follows:

The Contractor shall increase the principal amount of the performance and labor and materials payments bond(s) in direct proportion to any increase in the value of the Contract resulting from such change orders.

11.4.4 Add new subparagraph 11.4.4 as follows:

Bonds furnished by the Contractor shall comply with all relevant Connecticut statutes including Conn. Gen. Stat. Sec. 49-41.

ARTICLE 12 - UNCOVERING AND CORRECTION OF WORK

12.1.1 Add the words "or Owner's" after the word "Architect's" in lines 1 and 3. Add the words "or Owner" after the word "Architect" in line 2.

12.1.2 Add the words "or Owner" after the word "Architect" on lines 1 and 2.

12.2.2 Delete sub-subparagraphs 12.2.2.1, 12.2.2.2 and 12.2.2.3 in their entirety and substitute with the following:

12.2.2 If, within one year after the date of final completion of the Work or designated portion thereof, or after the date for commencement of warranties established under subparagraph 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly at the Contractor's sole expense after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. This period of one year shall be extended with respect to portions of Work first performed after final completion, by the period of time between final completion and the actual performance of the Work. This obligation under this subparagraph 12.2.2 shall survive acceptance of the Work under the Contract and termination of the Contract. The Owner shall give such notice promptly after discovery of the condition.

ARTICLE 13 - MISCELLANEOUS PROVISIONS

13.1 Add the following to the end of subparagraph 13.1:

The Work shall comply with all applicable laws, statutes, ordinances, codes, rules, regulations or orders during its performance and its completion.

13.4.1 Delete the words "by law" in line 3 and substitute with the words "at law or in equity".

13.4.3 Add new subparagraph 13.4.3 as follows:

No provision contained in the Contract Documents shall create or give to third parties any claim or right of action against the Owner or the Contractor except as specifically provided herein.

13.5.1 Delete subparagraph 13.5.1 in its' entirety and substitute with the following:

If the Contract Documents, or any laws, ordinances, building codes, rules, regulations or orders of any governmental body or public or quasi-public authority having jurisdiction over the Work or the site of the Project require any portion of the Work to be inspected, tested or approved, the Contractor shall give the Architect and the Owner timely notice thereof so Architect and Owner may observe such inspection, testing or approval. The Contractor shall bear all costs of such inspections, test or approvals except where the Contract Documents provide otherwise.

13.6 Delete subparagraph 13.6 in its' entirety.

13.7 Delete paragraph 13.7 in its' entirety.

13.8 CAPTIONS

13.8. The captions and headings of various Articles and Paragraphs in the Contract Documents are for convenience only and are not to be construed as defining or limiting, in any way, the scope or intent of the provisions hereof.

13.9 Add a new Paragraph 13.9 as follows:

13.9 SEVERABILITY

13.9 The invalidity of any covenant, restriction, condition, limitation in any other part or provision of the Contract Documents shall not impair or affect in any manner the validity, enforceability or effect of the remainder of the Contract Documents.

13.10 Add a new Paragraph 13.10 as follows:

In the event of any unavoidable cause beyond the control of the parties, whether natural or man-made, which renders the performance of this contract impossible, the contract shall be terminated. Such occurrences shall include, without limitation, death of the Contractor (in the event that the Contractor is a sole proprietor); destruction of all, or a major portion of the Contractor's equipment; legal order by a court of competent jurisdiction, or referendum barring performance of the contract;

war, famine, flood, plague, pestilence or act of God. Any amounts due to either party by the other as the result of actions taken pursuant to the contract prior to the occurrence which renders performance impossible shall be paid, but no further sums shall be due from either party to the other, by way of damages for the termination of the contract.

13.11 Add new paragraph 13.11 as follows:

The Contractor shall comply with Section 12-43 of the Connecticut General Statutes as may be amended.

Sec. 12-43. Property of nonresidents. All owners of real estate, or of tangible personal property located in any town for three months or more during the assessment year immediately preceding any assessment day, who are nonresidents of such town, shall file lists of such real estate and personal property with the assessors of the town in which the same is located on such assessment day, if located in such town for three months or more in such year, otherwise, in the town in which such property is located for the three months or more in such year nearest to such assessment day, under the same provisions as apply to residents, and such personal property shall not be liable to taxation in any other town in this state. The list of each nonresident taxpayer shall contain his post-office and street address. The assessors shall mail to each nonresident, or to his attorney or agent having custody of his taxable property, at least fifteen days before the expiration of the time for filing lists, blank forms for filing lists of such property. The lists of taxable property of nonresidents shall be arranged in alphabetical order and separate from the lists of residents, provided no such separation shall be necessary in any town the board of assessors of which, upon the request of its property tax collector, has made rules and regulations approved by the secretary of the office of policy and management setting up an alternative method of arrangement.

ARTICLE 14 - TERMINATION OR SUSPENSION OF THE CONTRACT

14.1.1 Delete the number "30" on line 1 and substitute with the number "60".

14.1.3 Delete subparagraph 14.1.3 in its entirety and substitute with the following:

If one of the reasons described in subparagraph 14.1.1 or 14.1.2 exists, the Contractor may, upon seven additional days written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for work executed.

14.2.1 Delete subparagraph 14.2.1 in its' entirety and substitute with the following:

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- 14.2.1 The Owner may terminate the Contract for any of the following causes:
- 14.2.1.1 If the Contractor shall institute or consent to proceedings requesting relief or arrangement under the Federal Bankruptcy Act or any similar or applicable federal or state law or if a petition under any federal or state bankruptcy or insolvency law is filed against the Contractor and such petition is not dismissed within sixty (60) days from the date of said filing, or if the Contractor admits in writing his inability to pay his debts generally as they become due, or if he makes a general assignment for the benefit of his creditors, or if a receiver, liquidator, trustee or assignee is appointed on account of his bankruptcy or insolvency; or
- 14.2.1.2 If a receiver of all or any substantial portion of the Contractor's properties is appointed; or
- 14.2.1.3 If the Contractor abandons the Works; or
- 14.2.1.4 If the Contractor fails to prosecute the Work promptly and diligently; or
- 14.2.1.5 If the Contractor fails or refuses to supply enough properly skilled workers or proper materials for the Work; or
- 14.2.1.6 If the Contractor submits an Application for Payment, sworn statement, waiver of lien, affidavit or document of any nature whatsoever which is intentionally falsified; or
- 14.2.1.7 If the Contractor fails to make prompt payment to Subcontractors or for materials or labor or otherwise breaches his obligations under any Subcontract with a Subcontractor; or
- 14.2.1.8 If a mechanic's or materialman's lien or notice of lien is filed against any part of the Work or the site of the Project and not promptly bonded or insured over by the Contractor in a manner satisfactory to the Owner; or
- 14.2.1.9 If the Contractor disregards any laws, statutes, ordinances, rules, regulations or orders of any governmental body or public or quasi-public authority having jurisdiction of the Work or the site of the Project; or

14.2.1.10 If the Contractor otherwise substantively violates any provision of the Contract Documents.

14.2.2.1 Delete the semicolon after "Contractor" in line 2 and add:

and may request that the Contractor remove any part or all of his equipment, machinery, and supplies from the site of the Project within seven (7) days from the date of such request, and in the event of Contractor's failure to do so, may remove or store such equipment, machinery and supplies at the Contractor's expense;

14.2.4 Delete subparagraph 14.2.4 in its' entirety and substitute with the following:

If the unpaid balance of the Contract Sum exceeds all costs to the Owner of completing the Work, then the Contractor shall be paid for all Work performed by the Contractor to the date of termination. If such costs to the Owner of completing the Work exceed such unpaid balance, the Contractor shall pay the difference to the Owner immediately upon the Owner's demand. The costs to the Owner of completing the Work shall include (but not be limited to) the cost of any additional architectural, managerial and administrative services required thereby, any costs incurred in retaining another Contractor or other Subcontractors, any additional interest or fees which the Owner must pay by reason of a delay in completion of the Work, attorney's fees and expenses, and any other damages, costs and expenses the Owner may incur by reason of completing the Work or any delay thereof. The amount, if any, to be paid to the Owner or Contractor shall be certified by the Architect, upon application, in the manner provided in Paragraph 9.4, and this obligation for payment shall survive the termination of the Contract".

14.3.2 In line 1, delete "shall" and insert "may".

14.4.3 On line 2, insert a period after the word "termination" and delete the remaining words on lines 2 and 3.

ARTICLE 15 – CLAIMS AND DISPUTES

15.1.2 Delete the number "21" in line 4 and replace with the number "10".

15.2.1 Delete subparagraph 15.2.1 and substitute the following:

Decision of Architect. Claims, including those alleging an error or omission by the Architect, shall be referred initially to the Architect for decision. A decision by the Architect shall be required as a condition precedent to mediation, litigation or other formal method of dispute resolution of all Claims between the Contractor and the Owner arising prior to the date final payment is due, unless no decision has been

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rendered by the Architect within 45 days of referral of the Claim to the Architect or the Architect fails to provide a decision as scheduled in subparagraphs 15.2.2 through 15.2.5, whichever is later.

15.2.2 On line 4 add the word “or” after the word “Claim,” and add a period after the word “compromise.” Delete the balance of the paragraph after the word “compromise”.

15.2.3 On lines 3 and 4 replace the words “Owner” and “Owner’s” with “claimant” and “claimant’s”.

15.2.4 Delete the last sentence of subparagraph 15.2.4 and substitute the following:

“Within 10 days of receipt of the response or supporting data, if any, the Architect will either reject or approve the claims in whole or in part, or suggest a compromise.”

15.2.5 Delete the second sentence of subparagraph 15.2.5.

15.2.9 Add new subparagraph 15.2.9 as follows:

If a claim has not been resolved after consideration of steps described in subparagraphs 15.2.1 through 15.2.5, then the parties shall make an additional good faith effort to resolve the claim through an informal dispute resolution process mutually agreeable to the parties. If the claim is still not capable of resolution within ten days or such other time period that is mutually agreed upon, the parties may proceed to arbitration, litigation, or formal alternate dispute resolution.

15.2.10 Add new subparagraph 15.2.10 as follows:

If no form of dispute resolution is mutually agreed upon, no party may compel arbitration, mediation or alternate dispute resolution, and the parties may pursue whatever legal remedies are available to them.

15.3 (15.3.1 – 15.3.3) Delete in its' entirety.

15.4 (15.4.1 – 15.4.3) Delete in its' entirety.

END OF SUPPLEMENTARY GENERAL CONDITIONS

PROJECT MANUAL

for the

**RESTROOM
BUILDING**

**Eisenhower Park
33 Sheep Hill Road
West Hartford, Connecticut**

February 6, 2020
Issued for Bidding

TITLE PAGE

for the

RESTROOM BUILDING

Eisenhower Park
33 Sheep Hill Road
West Hartford, Connecticut

Owner: Town of West Hartford
Department of Leisure Services
50 South Main Street
West Hartford, Connecticut 06107

Architect: bostwick ARCHITECTS, LLC
56 Arbor Street
Hartford, Connecticut 06106

Structural Engineer: Toce Structural Engineering, LLC
1755 Meriden Waterbury Turnpike, Unit 6
Middale, Connecticut 06467

Mechanical/Electrical Engineer: RZ Design Associates, Inc.
750 Old Main Street, Suite 202
Rocky Hill, Connecticut 06067

February 6, 2020
Issued for Bidding

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SPECIFICATIONS FORMAT

1.1 FORMAT

- A. These Specifications generally follow the Construction Specifications Institute format:

Divisions
Sections
Articles
Paragraphs
Subparagraphs

- B. Generally each Section, except for Division 1 Sections, is divided into three (3) parts:

Part 1 - General
Part 2 - Products
Part 3 - Execution

Note: Certain Sections may contain a "Part 4 – Schedules".

1.2 LANGUAGE

- A. The Specifications language is written using both indicative mood and imperative mood.

Where the imperative mood is used, the language is directed to the Contractor, unless specifically indicated otherwise.

- B. Where a colon (:) is used after a subject, the phrase "shall be" (or variations thereof) is to be inferred.

- C. Where the word "provide" is used, the meaning shall be that the item or product shall be "furnished, delivered, and installed/erected/applied/connected for its intended use and as required for the completed Work."

- D. Instruction Terms

Wherever reference is made in the Contract to the Work or its performance, the terms "directed", "required", "permitted", "ordered", "designated", "prescribed", and words of similar import shall imply the direction, requirement, permission, order, designation or prescription of the intent of the documents

- E. Approval and Acceptance Terms

"Approved", "acceptable", "satisfactory" and words of similar import shall mean and intend: approved by, acceptable to, or satisfactory to, the Architect.

1.3 CONTRACT DOCUMENTS MADE PART OF TECHNICAL SECTIONS

- A. General Conditions, General Requirements (Div. 1), and Supplementary General Requirements are made part of each technical Section whether or not attached thereto.

- B. Addenda, Amendments, Change Orders, Modifications and all other parts of the Contract Documents are made a part of each technical Section, where applicable, whether or not attached thereto.

END OF SECTION

SUMMARY OF THE WORK

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Scope of the Work.
- B. Contractor use of site and premises.
- C. Work Sequence.

1.2 SCOPE OF THE WORK

- A. General construction consisting of the demolition of the existing building, slab and concrete piers.
- B. The construction of a new restroom and storage building with covered exterior slab. New building is a slab on grade utilizing the existing footing and foundation wall, deco-faced CMU, wood roof structure and thermoplastic membrane roof. Interior walls are CMU, painted with moisture resistant sheetrock ceiling and sealed concrete floor. New fixtures, lighting and accessories.

1.3 CONTRACTORS USE OF SITE AND PREMISES

- A. The Contractor shall assume full responsibility of all protection and safe keeping of products under this Contract, as well as,
 - 1. Follow all security requirements of Owner.
 - 2. Securing the site at the end of each workday.
- B. Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

1.4 WORK SEQUENCE

- A. The Contractor shall construct work as indicated on the drawings and coordinate construction schedule and operations of all subcontractors with the Owner and the Architect.
- B. The Owner will not occupy the site during the Work as established prior to start of project.
- C. The Contractor shall substantially complete the Work no later than June 15, 2020.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

CONTRACT CONSIDERATIONS

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of contract, including General and Supplementary General Conditions and Division – 1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Construction Time.
- B. Schedule of Values.
- C. Application for Payment.
- D. Change Procedures.
- E. Request for Information.

1.2 RELATED SECTIONS

- A. Document Owner – Contractor Agreement.
- B. Section 01300 – Submittals: Schedule of Values.
- C. Section 01600 – Material and Equipment: Product substitutions.

1.3 CONSTRUCTION TIME

- A. Upon execution of Owner – Contractor Agreement and/or receipt of written notices to proceed, the Contractor shall be ready to start work at the site. The Contractor shall be ready to deliver a 100 percent completed project to the Owner no later than June 30, 2020.

1.4 SCHEDULE OF VALUES

- A. Submit typed schedule on AIA Form G702 – Application and Certificate for Payment Continuation Sheet.
- B. Submit Schedule of Values in duplicate within 14 days after date of Owner-Contractor Agreement.
- C. Suggested Format: Utilize the Table of Content of this Project Manual. Identify each line item with number and title of the major specification Section. Provide a separate line for Labor and Materials for each item. Identify site mobilization, bonds and insurance. This is the required minimum breakdown for the Schedule of Values; the Contractor may provide additional breakdowns.
- D. Revise schedule to list approved Change Orders, with each Application for Payment.

1.5 APPLICATION FOR PAYMENT

- A. Submit three original typed Partial Payment Estimate RD 1924-18 (Rev. 6/97).
- B. Submit up-dated construction schedule with each Application for Payment.

1.6 CHANGE PROCEDURES

- A. The Architect will advise of minor changes in the Work not involving an adjustment to Contract Sum or Contract Time as authorized by AIA A201 Article 7.4 by issuing supplemental instructions on AIA Form G710 Architect's Supplemental Instructions.
- B. The Architect may issue a Proposal Request which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change and the period of time during which the requested price will be considered valid. Contractor will prepare and submit an estimate within 15 days.
- C. The Contractor may propose a change by submitting request for change to the Architect using AIA Form G709 Proposal Request, describing the proposed change and its full effect on the work. Include a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01600.
- D. Stipulated Change Order: Based on Proposal Request and Contractor's fixed price quotation or Contractor's request for a Change Order as approved by Architect.
- E. Construction Change Directive: Architect may issue a directive on AIA Form G704 Construction Change Directive signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum or Contract Time. Promptly execute the change.
- F. Change Order Forms: RD 1924-7 (Rev. 2/97).
- G. Execution of Change Orders: Architect will issue Change Orders of signatures of parties as provided in the Conditions of the Contract.

1.7 REQUEST FOR INFORMATION

- A. Submit all clarification requests or request for information using Architect's RFI form (enclosed). Indicate RFI number, date, who is initiating the request, date of desired response and which design team number is affected.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

APPLICATIONS FOR PAYMENT

1.1 PAYMENT

- A. Payment will be made in accordance with Section 16.01 of the General Conditions, and Article 9 of the Supplementary Conditions of this Specification.

1.2 UNINCORPORATED MATERIALS

- A. Partial Payments for Materials in Advance of Their Incorporation in the Work Pursuant to Article 16 of the General Conditions and Article 11 of the Supplementary Conditions of this Specification.

1. In order to better ensure the availability of materials, fixtures and equipment when needed for the work, the Owner's may authorize partial payment for certain materials, but only in strict accordance with and subject to all the terms and conditions set forth in this Article, unless another method of payment is elsewhere provided in the Specifications for specified materials, fixtures or equipment.
2. The Contractor shall submit to the Owner's a written request, in quadruplicate, for payment of materials purchased or to be purchased for which Contractor desires to be paid prior to their actual incorporation in the work. The request shall be accompanied by a schedule of the types and quantities of materials, and shall state whether such materials are to be stored on or off the site.
3. Where the materials are to be stored off the site, they shall be stored at a place other than the Contractor's premises (except with the written consent of the Owner's).
4. The Contractor shall set apart and separately store at the place or places of storage all materials and shall clearly mark the materials "PROPERTY OF OWNER'S" and further, shall not at any time move any of said materials to another off-site place of storage without the prior written consent of the Owner. Materials may be removed from their place of storage off the site for incorporation in the work upon approval of the Owner.
5. Where the materials are to be stored at the site, they shall be stored at such locations as shall be designated by the Owner and only in such quantities as, in the opinion of the Owner, will not interfere with the proper performance of the work by the Contractor or by other contractors then engaged in performing work on the site. Such materials shall not be removed from their place of storage on the site except for incorporation in the work, without approval of the Owner.

- B. Insurance

1. Storage Off Site: Where the materials are stored off the site and until such time as they are incorporated in the work, the Contractor shall fully insure such materials against any and all risks of destruction, damage or loss, including but not limited to fire, theft, and any other casualty or happening. The policy of insurance shall be payable to the Owner. It shall be in such terms and amounts as shall be approved by the Owner and shall be placed with a company duly licensed to do business in the State of Connecticut. The Contractor shall deliver the original and one copy of such policy and policies marked "Fully Paid" to the Owner.

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2. Storage on Site: Where the materials are stored at the site, the Contractor shall furnish satisfactory evidence to the Owner that they are properly insured against loss, by endorsement or otherwise, under the policy or policies of insurance obtained by the Contractor to cover losses to materials owned or installed by the Contractor. The policy of insurance shall cover fire and extended coverage against windstorm, hail, explosion and riot attending a strike, civil commotion, aircraft, vehicles and smoke.
- C. All costs, charges and expenses arising out of the storage of such materials, shall be paid by the Contractor; and the Owner hereby reserves the right to retain out of any partial or final payment made under the Contract an amount sufficient to cover such costs, charges and expenses, with the understanding that the Owner shall have and may exercise any and all other remedies of law for the recovery of such costs, charges and expenses. There shall be no increase in the Contract price for such costs, charges and expenses and the Contractor shall not make any claim or demand for compensation therefor.
- D. The Contractor shall pay any and all cost of handling and delivery of materials, from the place of storage to the site of the work, and the Owner shall have the right to retain from any partial or final payment an amount sufficient to cover the cost of such handling and delivery.
- E. In the event that the whole or any part of these materials are lost, damaged or destroyed in advance of their satisfactory incorporation in the work, the Contractor, at the Contractor's own expense, shall replace such materials with items of the same quality. The Owner will reimburse the Contractor for the cost of the replaced materials to the extent, and only to the extent, of the money actually received by the Owner under the policies of insurance herein before referred to. Until such time as the materials are replaced, the Owner will deduct from the value of the stored materials or from any other money due under the Contract, the amount paid to the Contractor for such lost, damaged or destroyed materials.
- F. Should any of the material paid for by the Owner hereunder be subsequently rejected or incorporated in the work in a manner or by a method not in accordance with the Contract and Specifications, the Contractor shall remove and replace such defective or improperly incorporated materials with materials complying with the Contract and Specifications. Until such materials are replaced, the Owner will deduct from the value of the stored materials or from any other money due the Contractor, the amount paid by the Owner for such rejected or improperly incorporated materials.
- G. Payment for the cost of materials made hereunder shall be made in accordance with the Contract Documents, and the Contractor always retains and must comply with the Contractor's duty to deliver to the site and properly incorporate in the work only materials which comply with the Contract Documents.
- H. The Contractor shall retain any and all risks in connection with the damage, destruction or loss of the materials paid for hereunder to the time of delivery of the same to the site of the work and their proper incorporation in the work in accordance with the Contract Documents.
- I. The Contractor shall comply with all laws and the regulations of any governmental body or agency pertaining to the priority purchase, allocation and use of the materials.
- J. When requesting payment for such materials, the Contractor shall submit with the partial estimate duly authenticated DOCUMENTS OF TITLE such as bills of sale, invoices or warehouse receipts, all in quadruplicate. The executed bills of sale shall TRANSFER TITLE to the materials from the Contractor to the Owner (in the event that the invoices state that material has been purchased by a Subcontractor, bills of sale in quadruplicate will also be required transferring title to the materials from Subcontractor to the Contractor).

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- K. The Contractor shall include in each succeeding partial estimate requisition a summary of materials stored, which shall set forth the quantity and value of materials in storage, on or off the site, at the end of each preceding estimate period: (1) the amount removed for incorporation in the work; and (2) the quantity and value of materials delivered during the current period and the total value of materials on hand for which payment thereof will be included in the current payment estimate.
- L. Upon proof to the satisfaction of the Owner of the actual cost of such materials and upon submission of proper proof of title as required under Paragraph J. herein, payment will be made therefor to the extent of 95%, provided however, that the cost so verified, established and approved shall not exceed the estimated cost of such materials included in the detailed bid breakdown submitted by the Contractor and approved by the Owner in accordance with schedule D; if it does, the Owner will pay only 95% of the bid breakdown.
- M. Upon the incorporation in the work of any such materials, which have been paid for in advance of such incorporation in accordance with the foregoing provisions, payment will be made for such materials incorporated in the work pursuant to Paragraph L. herein.

END OF SECTION

COORDINATION AND MEETINGS

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Coordination.
- B. Pre-construction conference.
- C. Progress meetings.

1.2 COORDINATION

- A. Coordinate scheduling, submittals, and Work of the various Sections of Specifications to assure efficient and orderly sequence of installation of interdependent construction elements as well as meeting Owner security requirements.
- B. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate installation of mechanical and electrical work, which are indicated diagrammatically on Drawings. Follow routing shown and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. Coordinate completion and clean up of Work of separate sections in preparation for Substantial Completion.
- E. In finished areas, conceal pipes, ducts, and wiring within the construction. Coordinate location of fixtures and outlets within finishes.
- F. Coordinate completion and cleanup of Work of separate sections in preparation for Substantial Completion.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION CONFERENCE

- A. Architect will schedule a conference after Notice of Award and provide minutes of meeting.
- B. Attendance Required: Architect, Owner's representatives, Contractor, Contractor's Superintendent, and major Subcontractors.
- C. Agenda:
 - 1. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.

2. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders and Contract closeout procedures.
3. Scheduling.
4. Use of premises by Owner and Contractor.
5. Security and housekeeping procedures.
6. Procedures for testing.
7. Procedures for maintaining record documents.
8. Establish schedule for progress meetings.

1.4 **PROGRESS MEETINGS**

- A. Architect will preside at meetings, record minutes, and distribute copies to Contractor and Owner's representative for distribution.
- B. Attendance Required: Job Superintendent, major Subcontractors and suppliers, Owner's representative, and Architect as appropriate to agenda topics for each meeting.
- C. Agenda:
 1. Review minutes of previous meetings.
 2. Review of Work progress.
 3. Field observations, problems, and decisions.
 4. Identification of problems, which impede planned progress.
 5. Review of submittals schedule and status of submittals.
 6. Review of off-site fabrication and delivery schedules.
 7. Maintenance of progress schedule.
 8. Corrective measures to regain projected schedules.
 9. Planned progress during succeeding work period.
 10. Coordination of projected progress.
 11. Maintenance of quality and work standards.
 12. Effect of proposed changes on progress schedule and coordination.
 13. Other business relating to Work.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

CUTTING AND PATCHING

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching of Work.

1.2 RELATED SECTIONS

- A. Section 01120 – Alteration Project Procedures: Cutting and patching for alterations work.
- B. Section 01300 - Submittals.
- C. Section 01600 – Materials and Equipment: Product Options and Substitutions.
- D. Individual Product Specification Sections:
 - 1. Cutting and patching incidental to work of the Section.
 - 2. Advance notification to other Sections of openings required in work of those Sections.

1.3 QUALITY OF CUTTING AND PATCHING WORK

- A. All work is to appear as if it was completed during original construction. All equipment shall be located as closely as possible to location indicated on drawings, however locations shall be adjusted in field to minimize cutting and patching of exposed materials. Conduit, piping, duct work, wiring and apparatus shall be concealed from view in all occupied spaces but may be exposed in mechanical, storage, janitorial and equipment spaces.
- B. All existing exposed materials which must be cut or removed for installation of new systems and materials shall be replaced or repaired to match existing materials as closely as practical.
- C. The Contractor shall, within 15 days of the contract signing, and prior to beginning the work, carefully examine the existing conditions and mark up one copy of the plans indicating preferred location of equipment and routing of conduit, piping, duct work and wiring to minimize cutting and patching. A meeting on site with the architect and his engineering consultants shall be arranged, to review these locations and extent of cutting and patching. Work will not proceed until these plans are approved.

1.4 SUBMITTALS

- A. Submit written request in advance of cutting or alteration which affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.

4. Visual qualities of sight exposed elements.
 5. Work of Owner or separate contractor.
- B. Include in request:
1. Identification of Project.
 2. Location and description of affected work.
 3. Necessity for cutting or alteration.
 4. Description of proposed work, and Products to be used.
 5. Alternatives to cutting and patching.
 6. Effect on work of Owner or separate contractor.
 7. Written permission of affected separate contractor.
 8. Date and time work will be executed.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Product Substitution: For any proposed change in materials, submit request for substitution under provisions of Section 01600.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
- B. After uncovering existing Work, inspect conditions affecting performance of Work.
- C. Beginning of cutting or patching means acceptance of existing conditions.

3.2 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- B. Provide protection from elements for areas, which may be exposed by uncovering work.
- C. Maintain excavations free of water.

3.3 CUTTING AND PATCHING

- A. Execute cutting, fitting, and patching including excavation and fill to complete Work.
- B. Fit Products together, to integrate with other work.

- C. Uncover work to install untimely work.
- D. Remove and replace defective or non-conforming work.
- E. Remove samples of installed work for testing when requested.
- F. Provide openings in the Work for penetration of mechanical and electrical work.

3.4 PERFORMANCE

- A. Execute work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.
- B. For existing items under warranty, employ original installer to perform cutting and patching for weather exposed and moisture resistant elements, and sight exposed surfaces.
- C. Cut rigid materials using masonry saw or core drill. Pneumatic tools are not allowed without prior approval or owner/architect.
- D. Restore work with new Products in accordance with requirements of Contract Documents.
- E. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- F. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rating safig material in accordance with Section 07210 – Building Insulation; Safing Insulation, to full thickness of the penetrated element.
- G. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

END OF SECTION

REGULATORY REQUIREMENTS

1.1 LAWS AND REGULATIONS

- A. All applicable Federal, State and other laws, orders, rule and regulations having jurisdiction over Construction Work in the locality of the Project, shall apply to the Contract and shall be deemed to be included in the Contract as if fully set forth herein at length.
- B. Comply with all requirements of the Connecticut State Building Code. (International Building Code-2003 with 2005 Connecticut Supplement), the Connecticut Fire Safety Code (2003 NFPA 101 with 2005 Connecticut Supplement)

1.2 PERMITS AND LICENSES

- A. The Contractor shall make the necessary arrangement for, and obtain all permits and licenses required for the Work, including paying the costs and expenses thereof.
- B. The Contractor shall be responsible for the payment of fees, which are assessed by any City, State or Federal agency having jurisdiction over the Work, unless otherwise stipulated in the Contract Documents.

1.3 COMPLIANCE

- A. The Contractor shall give all notices, pay all fees and comply with all laws, rules and regulations applicable to the Work.

1.4 ADDITIONAL COMPLIANCE

- A. The Contractor, Subcontractors, and the employees of the Contractor and Subcontractors, shall comply with all regulations governing conduct, access to the premises, operation of equipment and systems, and conduct while in or near the premises.

1.5 SAFETY

- A. The Contractor shall take every precaution against injuries to owner's personnel and the general public, in the performance of the Work. Refer to General Conditions, Art. 13.
- B. The Contractor shall comply with all applicable OSHA regulations.

END OF SECTION

REFERENCES

1.1 LIST

Following is a list of organizations, trade associations, trade institutes, and other Standards, with the acronym for each.

Where reference is made in a technical Section to a specification or a requirement of a particular Standard, the date of the Standard is that in effect at the time of the Bid Date, or that in effect at the date of the Contract Award, if there are no bids.

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturer's Association
AAN	American Association of Nurserymen
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ACI	American Concrete Institute
ACIL	American Council of Independent Laboratories
ACPA	American Concrete Pipe Association
ADC	Air Diffusion Council
AF+PA	American Forest & Paper Association
AGA	American Gas Association
AHA	American Hardboard Association
AIA	American Institute of Architects
A.I.A.	American Insurance Association
AIEE	American Institute of Electrical Engineers
AIHA	American Industrial Hygiene Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALI	Associated Laboratories

A.L.I.	Automotive Lift Institute
ALSC	American Lumber Standards Committee
AMCA	Air Movement and Control Association
ANSI	American National Standards Institute
AOAC	Association of Official Agriculture Chemists
APA	The Engineers Wood Association
A.P.A.	American Parquet Association
API	American Petroleum Institute
ARI	Air Conditioning and Refrigeration Institute
ARMA	Asphalt Roofing Manufacturers Association
ASA	Acoustical Society of America
ASC	Adhesive and Sealant Council
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASPE	American Society of Plumbing Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers Association
AWPB	American Wood Preservers Bureau
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Institute of America
BIFMA	Business and Institutional Furniture Manufacturer's Association
BOCA	Building Officials and Code Administrators
CABO	American Building Officials

CAUS	Color Association of the United States
CAGI	Compressed Air and Gas Institute
CBM	Certified Ballast Manufacturers Association
CDA	Copper Development Association
CGA	Compressed Gas Association
CISPI	Cast Iron Soil Pipe Institute
CRI	Carpet and Rug Institute
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards, U.S. Department of Commerce
CTI	Ceramic Tile Institute of America
DHI	Door and Hardware Institute
DLPA	Decorative Laminate Products Association
ECSA	Exchange Carriers Standards Association
EIA	Electronic Industries Association
EIMA	Exterior Insulation Manufacturers Association
FCI	Fluid Controls Institute
FGMA	Flat Glass Marketing Association
FS	Federal Specification
FTI	Facing Tile Institute
GA	Gypsum Association
HEI	Heat Exchange Institute
HI	Hydronics Institute
HMA	Hardwood Manufacturers Association
HPVA	Hardwood Plywood and Face Veneers
ICEA	Insulated Cable Engineers Association
IEC	International Electrotechnical Commission

IEEE	Institute of Electrical and Electronic Engineers
IESNA	Illuminating Engineering Society of North America
IGCC	Insulating Glass Certification Council
ILI	Indiana Limestone Institute of America
LPI	Lightning Protection Institute
MBMA	Metal Building Manufacturers Association
MCAA	Mechanical Contractors Association of America
MIA	Marble Institute of America
ML/SFAMetal Lath/Steel Framing Association	
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAAMM	National Association of Architectural Metal Manufacturers
NAPA	National Asphalt Pavement Association
NBGQANational Building Granite Quarries Association	
NBHA	National Builders Hardware Association
NBS	National Bureau of Standards
NCMA	National Concrete Masonry Association
NCRPM	National Council on Radiation Protection and Measurement
NEC	National Electric Code
NECA	National Electrical Contractors Association
NEII	National Elevator Industry, Inc.
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
N.F.P.A.	National Forest Products Association
NHLA	National Hardwood Lumber Association
NOFMANational Oak Flooring Manufacturers Association	
NPA	National Particleboard Association
NPCA	National Paint and Coatings Association

NRCA	National Roofing Contractors Association
NSF	National Sanitation Foundation
NSSEA	National School Supply and Equipment Association
NTMA	National Terrazzo and Mosaic Association
NVPMAN	National Veneer and Panel Manufacturers Association
NWMA	National Woodwork Manufacturers Association
NWWDA	National Wood Window and Door Association
OSHA	Occupational Safety and Health Administration
PCI	Prestressed Concrete Institute
PDI	Plumbing and Drainage Institute
PEI	Porcelain Enamel Institute
PS	Office of Product Standards National Bureau of Standards U.S. Department of Commerce
RFCI	Resilient Floor Covering Institute
RIS	Redwood Inspection Service
RMA	Rubber Manufacturers Association
SDI	Steel Deck Institute
S.D.I.	Steel Door Institute
SGCC	Safety Glazing Certification Council
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SPIB	Southern Pine Inspection Bureau
SPRI	Single Ply Roofing Institute
SSPC	Steel Structures Painting Council
SWI	Steel Window Institute

TCA	Tile Council of America
TIMA	Thermal Insulation Manufacturers Association
UL	Underwriters Laboratories
USDA	U.S. Department of Agriculture
USDC	U.S. Department of Commerce
WCLIB	West Coast Lumber Inspection Bureau
WCMA	Wall Covering Manufacturers Association
WRI	Wire Reinforcement Institute
WSC	Water Systems Council
WSFI	Wood and Synthetic Flooring Institute
WWPA	Western Wood Products Association
W.W.P.A.	Woven Wire Products Association

END OF SECTION

ALTERATION PROJECT PROCEDURES

PART 1 – GENERAL

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Products and installation for patching and extending Work.
- B. Transition and adjustments.
- C. Repair of damaged surfaces, finishes, and cleaning.

1.2 RELATED SECTIONS

- A. Section 01039 – Coordination and Meetings.

PART 2 – PRODUCTS

2.1 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New Materials: As specified in product Sections; match existing Products exactly and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspection and testing products where necessary, referring to existing Work as a standard.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify that areas are ready for installation of new Work.
- B. Beginning of Work means acceptance of existing conditions.

3.2 PREPARATION

- A. Cut, move, or remove items as necessary for access to alterations and renovation work. Replace and restore at completion.
- B. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- C. Remove debris and abandoned items from area and from concealed spaces.
- D. Prepare surface and remove surface finishes to provide for proper installation of new work and finishes.
- E. Close openings in exterior surfaces to protect existing work and salvage items from weather and extremes of temperature and humidity. Insulate ductwork and piping to prevent condensation and freezing in exposed areas.

- F. Repair any damages to existing construction due to contractors negligence.

3.3 INSTALLATION

- A. Coordinate work of alteration and renovations to expedite completion sequentially and to accommodate Owner occupancy.
- B. Project: Complete in all respects including operational mechanical and electrical work.
- C. Remove, cut and patch Work in a manner to minimize damage and to provide a means of restoring Products and finishes to original or specified condition.
- D. Refinish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material, with a neat transition to adjacent finishes.
- E. Install Products as specified in individual Sections.

3.4 TRANSITIONS

- A. Where new Work abuts or aligns with existing, perform a smooth and even transition. Patched Work to match existing adjacent Work in texture and appearance.
- B. When finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.

3.5 ADJUSTMENTS

- A. Where removal of partitions or walls results in combining adjacent rooms, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
- B. Where a change of plane of ¼ inch or more occurs, request instruction from Architect.

3.6 REPAIR OF DAMAGED SURFACES

- A. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.
- B. Repair substrate prior to patching finish.

3.7 FINISHES

- A. Finish surfaces as specified in individual Product Sections.
- B. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

3.8 CLEANING

- A. In addition to cleaning specified in Section 01500, clean Owner occupied areas of work at end of workday.

END OF SECTION

PROJECT MEETINGS

1.1 PURPOSE

Project meetings shall be held to accomplish the following:

- A. Coordinate the Work.
- C. Surface problem areas assign responsibilities to appropriate parties: i.e., Architect, Owner Project Officer, or Contractor.

1.2 INITIAL JOB MEETING (PRE-CONSTRUCTION MEETING)

- A. The Owner's Representative shall call a Pre-Construction meeting, which the Contractor shall attend. This meeting shall be called prior to the start of construction.

1.3 JOB PROGRESS MEETINGS

- A. Job progress meetings shall be scheduled by the Architect or Owner's Representative during the course of construction; the Representative shall preside. The Contractor or the Contractor's duly authorized representative and such Subcontractors, Material men and vendors as required by the Contractor or the Architect or Owner's Representative shall be present at all job progress meetings. The Contractors and Subcontractors, Material men and vendors shall answer questions on progress, workmanship, approvals required, delivery of material and other subjects concerning the Work. The purpose of such meetings is to coordinate the efforts of all concerned so that the Work proceeds without delay to completion as required by the Contract.

END OF SECTION

SUBMITTALS

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Shop drawings.
- D. Product data.
- E. Samples.
- F. Manufacturers' instructions.
- G. Manufacturers' certificates.

1.2 RELATED SECTIONS

- A. Section 01400 – Quality Control
- B. Section 01700 – Contract Closeout

1.3 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Contractor's standard transmittal form or cover letter.
- B. Sequentially number the transmittal forms. Resubmittals to have original number with an alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor, or supplier; pertinent drawing sheet and detail numbers, and specification section number, as appropriate.
- D. Apply Contractor's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- E. Schedule submittal to expedite the Project, and deliver to Architect at business address. Coordinate submission of related items.
- F. Identify variations from Contract Documents and Product or system limitations, which may be detrimental to successful performance of the completed Work.
- G. Provide space for Contractor and Architect and Engineer review stamps.
- H. Revise and resubmit submittals as required, identify all changes made since previous submittal.
- I. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.4 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial progress schedule in duplicate within 7 days after date of Owner-Contractor Agreement for Architect review.
- B. Revise and resubmit every two weeks.
- C. Submit revised schedules with each Application for Payment, identifying changes since previous versions.
- D. Submit a horizontal bar chart with separate line for each major section of Work or operation, identifying first workday of each week.
- E. Show complete sequence of construction by activity, identifying Work of separate stages and logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
- F. Indicate estimated percentage of completion for each item of Work at each submission.
- G. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates.

1.5 SHOP DRAWINGS

- A. Submit six copies.
- B. After review, distribute in accordance with Article on Procedures above and provide copies for Record Documents described in Section 01700 – Contract Closeout.

1.6 PRODUCT DATA

- A. Submit six copies.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.
- C. After review, distribute in accordance with Article on Procedures above and provide copies for Record Documents described in Section 01700 – Contract Closeout.

1.7 SAMPLES

- A. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- B. Submit samples of finishes from the full range of manufacturers' standard colors and in custom colors selected, textures, and patterns for selection.
- C. Include identification on each sample, with full Project information.
- D. Submit the number of samples specified in individual specification sections.
- E. Reviewed samples submittal requirements in individual specification sections.

1.8 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.
- B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.9 MANUFACTURER'S CERTIFICATES

- A. When specified submit manufacturers' certificate to Architect for review, in quantities specified for Product Data.
- B. Indicate material or Product that conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certification as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Architect.
- D. Certify that products used are the current production materials.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

SHOP DRAWINGS AND SAMPLES

1.01 CONTRACTOR SUBMITTAL

- A. The Contractor shall submit the Shop Drawings, technical data, and Samples required by the Contract. The Contractor shall adhere to all submittal and scheduling requirements for Shop Drawings and Samples. After examination of such Shop Drawings and Samples by the Architect and the return of such items by the Architect to the Contractor, the Contractor shall make corrections indicated and shall furnish to the Architect the required number of corrected copies of Shop Drawings and Samples.

1.02 SHOP DRAWINGS

- A. Shop Drawings shall be accompanied by a letter of transmittal to the Architect or the Owner's Representative requesting approval and date approval is desired.
- B. Each Shop Drawings and letter of transmittal shall be identified with the following information:
 - 1. Project title.
 - 2. Contract name and Contract number.
 - 3. Date of the drawing, including dates of any revisions.
 - 4. Name of Contractor, name of Subcontractor, material supplier and manufacturer, as applicable.
 - 5. Name of person or firm preparing Shop Drawings.
 - 6. Contract Drawing numbers and Specifications, Section Division and Paragraph numbers used as references in preparing Shop Drawings, and titles of items to which the Shop Drawings refer.
- C. Shop Drawings shall show the design, dimensions, connections and other details necessary to ensure that the Shop Drawings accurately interpret the Contract Documents and shall also show adjoining Work in such Detail as required to provide proper connections with said adjoining Work. Where adjoining connected Work requires Shop Drawings, such Shop Drawings shall be submitted to the Architect or the Owner's Representative for approval at the same time so that connections can be checked.
- D. The Contractor shall verify all field measurements. Measurements available prior to submittal of Shop Drawings shall be shown and so noted on the Shop Drawings. Measurements not available prior to submission of Shop Drawings shall be noted on the Shop Drawings as not available and such measurements shall be obtained prior to fabrication.
- E. The Contractor shall submit manufacturer's drawings and specifications when necessary to fully explain apparatus and equipment required by the Work. These manufacturer's drawings and specifications shall be treated as Shop Drawings. Manufacturer's catalog numbers alone are not acceptable as sufficient information for compliance with this requirement.

1.03 PROCEDURE FOR SUBMITTAL AND APPROVAL OF ALL SHOP DRAWINGS

- A. After approval of the required Shop Drawings Schedule, the Contractor shall submit 6 prints or 5 prints and one sepia of Shop Drawings and product data to the Architect or the, or designated Representative for review and approval. A satisfactory Shop Drawing will be stamped "Approved" or "Approved As Noted," and dated; 3 prints or 2 prints and one sepia will be returned to the Contractor.
- B. Should the Shop Drawings not be approved by the Architect or the Designated Representative, it will be stamped "Not Approved" and two sets of such Shop Drawings will be returned to the Contractor with the necessary corrections and changes to be made in accordance with the notations indicated thereon.
- C. The Contractor shall make such corrections and changes and again submit 6 prints or 5 prints and one sepia of the Shop Drawings and product data for the approval of the Architect or the or the. The Contractor shall revise and resubmit the Shop Drawings as required by the Architect or the Designated Representative or the or the until approval thereof is obtained.

1.04 TRANSMITTALS, RESPONSIBILITY, SCHEDULE, PROCEDURES

- A. Copies of Transmittals - Copies of all Shop Drawing transmittal letters from the Contractor shall be sent to the Architect's.
- B. Variations - If the Shop Drawings show variations from the Contract requirements because of standard shop practice, or other reasons, the Contractor shall make specific mention of such variations in the letter of transmittal.
- C. Responsibility of Contractor
 - 1. The approval of Shop Drawings will be general and shall not relieve the Contractor of responsibility for the accuracy of such Shop Drawings, nor for the proper fitting and construction of the Work, nor of the furnishing of materials or Work required by the Contract and not indicated on the Shop Drawings. Approval of Shop Drawings shall not be construed as approving departures from the Contract Drawings, Supplementary Drawings or Specifications.
 - 2. Contractor shall be responsible for coordinating Shop Drawings of the various trades before submittal so as to avoid conflicting locations and conflicting routing of items and interference between items. Corrections resulting from such conflicts and interference shall be made by and at the expense of the Contractor.
- D. Shop Drawing Schedule - To enable the Work to be transacted in an orderly and expeditious manner, the Contractor shall within thirty (30) days after the Notice to Proceed, unless otherwise directed by the Architect or the Designated Representative, submit a proposed progress schedule showing the anticipated time of commencement and completion of the submission of Shop Drawings for each of the various operations to be performed under the Contract.

The Shop Drawing schedule shall be interfaced with the Construction Progress Schedule required by another Article in the General Requirements.
- E. Procedure for preparing, forwarding, checking and returning of all Shop Drawings shall be generally as follows:

1. The Contractor shall make available to the Contractor's Subcontractors the necessary Contract Documents and have them determine dimensions and conditions in the field, particularly with reference to coordination with other trades or work under other contracts;
 2. The Contractor shall direct the Subcontractors to prepare Shop Drawings for submission to the Architect or the Designated Representative, in accordance with the requirements of these "General Requirements".
 3. The Contractor shall also direct the Contractor's Subcontractors to flag or circle corrections made on all resubmission's for approval, so as to be readily seen, and that the symbol "Sub" be used to identify the source of correction or information that has been added.
 4. The Contractor shall:
 - a. Review and be responsible to the Architect for information shown on Subcontractor's shop and installation drawings and manufacturer's data, and also for conformity to Contract Documents.
 - b. Flag corrections made on all submissions for approval, so as to be readily seen, use the symbols "GC", "PL", "MECH" and "EL" to indicate that the correction and/or information added was made by the respective Subcontractor.
 - c. Clearly designate which trade is to perform the work when the use of "Work by Others" or other similar phrases are indicated on the Drawings before submission to the Owner's Representative.
 - d. Stamp all submissions "Recommended for Approval", date and forward required copies to the Owner's Representative.
- F. In order to expedite shop drawing procedures, the Contractor shall write a bi-weekly Shop Drawing status letter to the Architect and copies to the Field Representative, containing the following subject matter:
1. A list of all Shop Drawings which have been sent to but not returned by the Architect, giving name of the Subcontractor, Drawing number, title and date of submission.
 2. An indication of the desired priority of the return, if necessary.

Note: The status letter shall be prepared and sent at a given time, preferably Friday afternoon, to enable the Architect to receive the letter on Monday morning. This procedure shall be maintained throughout the active Shop Drawing period of construction.

1.05 **SAMPLES**

- A. A letter of transmittal shall accompany samples to the Owner's Representative requesting approval, and date approval is desired.
- B. Each sample shall be labeled with the following information:

1. Project title.
 2. Contract name.
 3. Date of submission.
 4. Name and quality of the material.
 5. Name of Contractor, name of Subcontractor, Material Supplier and Manufacturer, as applicable.
 6. Contract Drawing numbers and Specification Section, Division and Paragraph numbers used as reference in preparing Samples.
- C. Samples on Display - When Samples are specified to be equal to samples in the specifications or drawings, they shall be carefully compared to such samples for verification that they are equal in all respects.
- D. Samples shall be of sufficient size and quantity to show the quality, type, color, finish and texture of the material required to be furnished by the Contractor pursuant to the Contract. Furnish specific sizes and quantities where indicated in the respective technical Sections.
- E. Valuable Samples, such as hardware, plumbing and electrical fixtures, not destroyed by inspection or test, will be returned to the Contractor and may be incorporated into the Work after all questions of acceptability have been settled, providing suitable permanent records are made as to location of the Samples, their properties, and other pertinent information.

1.06 CONTRACTOR RESPONSIBILITY

- A. The Architect's approval of Shop Drawings and samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract. The Contractor shall be responsible for the accuracy of the Shop Drawings and Samples and for the conformity of Shop Drawings and Samples with the Contract unless the Contractor has notified the Architect of the deviation in writing at the time of submission and has received from the Architect written approval of the specified deviations. The Architect's approval shall not relieve the Contractor of responsibility for errors or omissions in the Shop Drawings and Samples.

1.07 COMMENCEMENT OF WORK

- A. No portion of the Work shall be commenced until required Shop Drawings and Samples are approved by the Architect.

END OF SECTION

QUALITY CONTROL

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Quality assurance and control of installation.
- B. References.
- C. Inspection and testing laboratory services.

1.2 RELATED SECTIONS

- A. Section 01300 - Submittals
- B. Section 01600 – Material and Equipment

1.3 QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply fully with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding. Architect's decision is final.
- D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce workmanship or specified quality. As per manufacturer's direction and as per individual specification section.
- F. Secure Products in place with positive anchorage devices designated and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.4 REFERENCES

- A. Conform to reference standards that are most current to the date of the bids.
- B. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding. Architect's decision is final.
- C. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference documents.

1.5 INSPECTION AND TESTING LABORATORY SERVICES

- A. In addition to testing specified in individual sections to be Contractor's responsibility, the Owner may employ and pay for services of an independent firm to perform inspection and testing.
- B. Contractor is to cooperate and coordinate with independent testing firm:
 - 1. Furnish samples of materials, design mix, equipment, tools, storage and assistance as requested.
 - 2. Notify Owner and independent testing firm 24 hours prior to expected time for operations requiring services.
 - 3. Make arrangements with independent firm and pay for additional samples and test required for Contractor's own use.
- C. Retesting required because of nonconformance to specified requirements shall be performed by the same independent firm on instructions by the Owner. Payment for retesting will be charged to the Contractor by deducting inspection or testing charges from the Contract Sum.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

CONSTRUCTION FACILITIES & TEMPORARY CONTROLS

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Temporary Utilities: Electricity, lighting, heat, ventilation, telephone service, water, and sanitary facilities.
- B. Temporary Controls: Barriers, enclosures and fencing, protection of the Work, water control and security.
- C. Progress Cleaning.
- D. Construction Facilities: Field Office.

1.2 RELATED SECTIONS

- A. Section 01700 – Contract Closeout: Final cleaning.

1.3 TEMPORARY ELECTRICITY

- A. Connect to power service as agreed upon by Owner.
- B. Owner will pay cost of energy used. Exercise measures to conserve energy.
- C. Provide power outlets for construction operations, with branch wiring and distribution boxes. Provide flexible power cords as required.
- D. Permanent convenience receptacles may be utilized during construction.

1.4 TEMPORARY LIGHTING

- A. Provide and maintain lighting for construction operations.
- B. Provide and maintain lighting to exterior staging and storage areas after dark for security purposes.
- C. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
- D. Maintain lighting and provide routine repairs.

1.5 TEMPORARY VENTILATION

- A. Contractor shall ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

1.6 TEMPORARY WATER SERVICE

- A. Contractor will connect to existing water source for construction operations.
- B. Owner will pay cost of water used. Exercise measures to conserve water.
- C. Extend branch piping with outlets located so water is available by hoses with threaded connections.

1.7 TEMPORARY SANITARY FACILITIES

- A. Contractor shall provide and maintain temporary sanitary facilities and enclosures. Contractor may not use facilities in the building.
- B. Contractor is responsible for maintaining the facilities during the entire period and return to the Owner at the end of the construction period at or exceed the original conditions.

1.8 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Protect non-contractor vehicular traffic, stored materials, site and structures from damage.

1.9 EXTERIOR ENCLOSURES

- A. Provide temporary insulated weather-tight closure of exterior openings to accommodate acceptable working conditions and protections for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification Sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.10 FENCING

- A. Construction: Provide 6 foot high chain link or plastic fencing around construction site: equip with vehicular and pedestrian access gates with locks.

1.11 WATER CONTROL

- A. Grade site to drain. Maintain excavation free of water. Provide, operate and maintain pumping equipment.
- B. Protect site from puddling or running water. Provide erosion control measures as required to protect site from soil erosion.

1.12 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification Sections.

1.13 SECURITY

- A. It shall be the Contractor's responsibility to secure the site and building until substantial completion.

1.14 PARKING

- A. Restrict parking of construction vehicles to the site as necessary.

1.15 PROJECT IDENTIFICATION

- A. Provide a project sign of exterior grade plywood and wood frame construction, painted, with exhibit lettering by professional sign painter.

1.16 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove waste materials, debris, and rubbish from site weekly and dispose off-site.

1.17 FIELD OFFICE

- A. Contractor will provide a field office if necessary. Weather-tight with lighting, electrical outlets, heating, cooling and ventilating equipment, and equipped with sturdy furniture and have space to accommodate (8) persons for project meetings.
- B. Contractor shall be responsible for providing any furnishing and equipment necessary for the display and reference use of the construction documents, shop drawings and other materials during the entire construction period.
- C. Contractor shall equip with a telephone and fax machine and use such office as the office of the construction superintendent.

1.18 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary above grade or buried utilities, equipment, facilities, materials, prior to Substantial Completion.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction as near as practical to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

MATERIAL AND EQUIPMENT

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Products.
- B. Transportation and handling.
- C. Storage and protection.
- D. Product options.
- E. Substitutions.

1.2 RELATED SECTIONS

- A. Section 01400 – Quality Control.

1.3 PRODUCTS

- A. Products: Means latest production material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- C. Provide interchangeable components of the same manufacturer, for similar components.

1.4 TRANSPORTATION AND HANDLING

- A. Transport and handle Products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to assure that Products comply with requirements, quantities are correct, and Products are undamaged.
- C. Provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

1.5 STORAGE AND PROTECTION

- A. Store and protect Products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive Products in weather-tight, climate controlled enclosures.
- B. For exterior storage of fabricated Products, place on sloped supports, above ground.
- C. Provide off-site storage and protection when site does not permit on-site storage or protection.

- D. Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- E. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- F. Provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.
- G. Arrange storage of Products to permit access for inspection. Periodically inspect to assure Products are undamaged and are maintained under specified conditions.

1.6 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any Product meeting those standards or description.
- B. Product Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.
- D. Products specified by naming one manufacturer without a provision for substitution: no substitution allowed.

1.7 SUBSTITUTIONS

- A. AIA document A701 – Instructions to Bidders specify time restrictions for submitting requests for Substitutions during the bidding period. In any case, substitutions during bidding are only acceptable if such substitutions are issued as addendum items.
- B. Substitutions may be considered when a Product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that the Contractor:
 - 1. Has investigated proposed Product and determined that it meets or exceeds the quality level of the specified Product.
 - 2. Will provide the same warranty for the Substitution as for the specified Product.
 - 3. Will coordinate installation and make changes to other Work, which may be required for the Work to be complete with no additional cost to the Owner.
 - 4. Waives claims for additional costs or time extension, which may subsequently become apparent.
 - 5. Will reimburse Owner for review or redesign services associated with reapproval by authorities.

- E. Substitutions will not be considered when they are indicated or implied on shop drawings or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
 - 1. Submit four copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
 - 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence.
 - 3. The Architect will notify the Contractor, in writing, of decisions to accept or reject request.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

PRODUCT OPTIONS AND SUBSTITUTIONS

1.1 TIME ALLOWED

- A. To be considered for approval, the requests by the Contractor to use optional products and to make substitutions shall be made to the Architect within the number of days after Notice to Proceed, as indicated in the following Schedule:

<u>Number of Calendar Days for Completion of Project</u>	<u>Number of Calendar Days After Notice to Proceed</u>
--	--

180 and Fewer

Thirty (30)

Requests will not be considered if made for a certain item or items if made at such date, which will not allow time for proper Architect analysis and determination for decision before need for incorporation of item or items in the Work of the Project.

Consideration for approval will be as stipulated in Article 4, Section 4.03 of the General Conditions.

1.2 INFORMATION FOR SUBMITTAL

- A. Submit product literature, samples, drawings, life cycle cost data, maintenance data, and other pertinent documentation that the Architect may reasonably require to make a proper analysis and determination.

1.3 APPROVAL DECISION

- A. The decision for approval or rejection of a product option or substitution shall rest solely with the Architect.

1.4 ACCOMMODATIONS FOR SUBSTITUTIONS

- A. In the event substitute products and systems, which are, accepted cause accommodations incurring additional costs, such costs shall be borne by the Contractor.

END OF SECTION

CONTRACT CLOSEOUT

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. Closeout Procedures.
- B. Final Cleaning.
- C. Adjusting.
- D. Project Record Documents.
- E. Operation and Maintenance Data.
- F. Warranties.
- G. Spare Parts and Maintenance Materials.

1.2 RELATED SECTIONS

- A. Section 01500 – Construction Facilities and Temporary Controls: Progress cleaning.

1.3 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Owner's inspection.
- B. Schedule final inspection with Owner's representative and Architect.
- C. If during final inspection, Owner's representative or the Architect found more than five items not completed, the inspection will be terminated and the contractor will complete all work and reschedule final inspection.
- D. On the second inspection, if more than five items are again found to be not completed, the Owner may consider action to terminate the contract and deduct the cost for completion by third party.
- E. Provide submittals to Owner that are required by governing or other authorities.
- F. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.4 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Clean equipment and fixtures to a sanitary condition.

- C. Clean site; sweep paved areas, rake clean landscaped surfaces.
- D. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.5 ADJUSTING

- A. Adjust operating Products and equipment to ensure smooth and unhindered operation and compliance with warrantee.

1.6 PROJECT RECORD DOCUMENTS

- A. Maintain on site, two sets of the following record documents; record actual revisions to the Work:
 - 1. Contract Drawings
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other Modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
- B. Store one set of Record Documents separate from documents used for construction.
- C. Record information concurrent with construction progress on an up-to-date set of red-marked, annotated as-built drawings, to be furnished to the Owner upon completion of construction.
- D. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and Modifications.
- E. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured locations of internal utilities and appurtenances concealed in construction, reference to visible and accessible features of the Work.
 - 2. Field changes of dimension and detail.
 - 3. Details not on original Contract Drawings.
- F. Delete Architect title block and seal from all documents.
- G. Submit documents to Owner with claim for final payment.

1.7 OPERATION AND MAINTENANCE DATA

- A. Submit three sets prior to final inspection, bound in 8-½ x 11 inch text pages, three side ring capacity expansion binders with durable plastic covers.
- B. Prepare red binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project.

- C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, type on 24 pound white paper.
- E. Part 1: Directory, listing names, addresses, and telephone number of Architect, Consultants, Contractor, Subcontractors, and major equipment suppliers.
- F. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone number of Subcontractors and suppliers. Identify the following:
 - 1. Significant design criteria.
 - 2. List of equipment.
 - 3. Parts list for each component.
 - 4. Operating instructions.
 - 5. Maintenance instructions for equipment and systems.
 - 6. Maintenance instructions for (special) finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
- G. Part 3: Project documents and certificates, including the following:
 - 1. Shop drawings and product data.
 - 2. Certificates.

1.8 WARRANTIES

- A. Provide duplicate notarized copies.
- B. Execute and assemble documents from Subcontractors, suppliers, and manufacturers.
- C. Submit three sets of Warranties with Table of Contents, prior to final inspection, bound in 8 ½ x 11 inch text pages, three side ring capacity expansion binders with durable plastic covers.
- D. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten days after acceptance as start of warranty period.

1.9 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.
- B. Deliver to Project site and place in location as directed; obtain receipt prior to final payment.

PART 2 – PRODUCTS Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

PROJECT RECORD DOCUMENTS

1.1 PROJECT RECORD DRAWINGS

- A. The purpose of the Project Record Drawings is to record the actual location of the Work in place, including, but not limited to, underground lines, concealed piping within buildings, concealed valves and control equipment, connections, switches, and cut-outs, and to record changes in the Work.
- B. In addition to the sets of Contract Drawings that are required by the Contractor on the Site to perform the Work, the Contractor shall maintain, at the Site, one (1) copy of all Drawings, Specifications and Addenda that are part of the Contract as awarded. Each of these documents shall be clearly marked "Project Record Drawing" as indicated below, maintained in a clean and neat condition available at all times for inspection by the Architect and shall not be used for any other purpose during the progress of the Work.

1. Each record drawing shall bear the legend "PROJECT RECORD DRAWING" in heavy block lettering, 1/2" high and contain the following data:

PROJECT RECORD DRAWING

- a. Contractor's Name _____
Contractor's Address _____
Made by _____ Date _____
- b. Checked by _____ Date _____

2. Where possible, changes from the Contract Drawings shall be conspicuously encircled.

C. Project Record Requirements

1. The Contractor shall mark-up the "Project Record Drawing" to show:
- a. Approved changes in the Work.
 - b. Location of underground Work and concealed Work.
 - c. Details not shown in the original Contract Documents.
 - d. All relocations of Work.
 - e. All changes in dimensions.
 - f. All access doors.
 - g. Location of all plumbing, heating, ventilating, air conditioning and electrical assemblies.
2. Such information shall include, but shall not be limited to:
- a. Footing depth in relation to finished grade elevations.
 - b. All changes in floor elevations.
 - c. All structural changes.
 - d. All substitutions.
 - e. Elevations and locations of all underground utilities, services, or structures referenced to permanent above-ground structures or monuments.
 - f. Designation of all utilities as to the size and use of such utilities.

- g. All invert elevations of manholes.
 - h. The location of all utilities, services and appurtenances concealed in building structures that have been installed different from that required by the Contract.
 - i. All approved change orders.
- D. The Contractor shall keep the Project Record Documents up-to-date from day to day as the Work progresses. Appropriate documents are to be updated promptly and accurately; no Work is to be permanently concealed until all required information has been recorded.
- E. Each month these record drawings will be examined by the Architect's Field Representative prior to recommending the approval of the partial payment request to ascertain that the record prints reflect the changes to date.
- F. Record Shop Drawings: If installed equipment is at variance with the respective approved Shop Drawing, the Contractor shall furnish to the Architect's Field Representative revised Shop Drawings indicating the actual completed installation.
- G. As-Built Drawings:
 - 1. At the conclusion of the job, the Contractor shall have transfer all the changes appearing on the Record Prints to two (2) sets of Mylar reproductions of the original contract tracings. The title block for the Mylar reproductions shall include the name of the Contractor or the name of the Consultant who prepared the reproductions.
 - 2. Two (2) sets of prints of Mylar "as-built" tracings will be provided to the Architect's Field Representative for approval as many times as is required until the prints are approved as reflecting the "as-built" installation.
- H. Shop Drawings for Permanent Records - In addition to the drawings required as above mentioned, the Contractor shall submit a list of all approved Shop Drawings of the Work as installed. From this list the Architect's Field Representative will select the drawings desired for permanent records. The Contractor shall furnish these in a bound set to the Architect's Field Representative.
- I. All of the above listed requirements of this Article shall be at the Contractor's expense.
- J. The Project Record Drawings are to be submitted by the Contractor to the Architect when all the Work is completed and shall be approved by the Architect before the Contractor may request final payment.
- K. Final payment shall be contingent on completion of the above listed requirements in this Section.

END OF SECTION

GUARANTEES, WARRANTIES, BONDS AND MAINTENANCE CONTRACTS

1.1 CONTRACTOR'S GUARANTEE

- A. Guarantee shall be as stipulated in Article 18 of the General Conditions.
- B. Manufacturers' warranties and guarantees shall be as stipulated in Article 6, Section 6.07 of the General Conditions.
- C. The Contractor shall furnish a written guarantee in the following form:

"GUARANTEE"

PROJECT _____

CONTRACT NO. _____

The Contractor hereby guarantees that the Work specified for the aforesaid Contract will be free from defects of material and workmanship for a period as specified in the General Conditions.

The Contractor also guarantees that the Contractor will repair or replace, whichever may be deemed necessary by the Architect, all defective material or workmanship of the Work, that may appear within the guarantee period, to the satisfaction of the Architect and without any cost or expense to the Architect.

Contractor

By _____

Date _____

Sworn to me before this

_____ day of _____, 20__

Notary Public

- D. Scheduling of corrective Work will be determined by the Architect. Work required to correct defective material or workmanship during the guarantee periods shall be done by the Contractor without cost to the Owner.
- E. Should the Contractor fail to remedy defects immediately, the Owner may Furnish such materials and labor as are necessary to bring the Work to the standard called for and the Contractor shall reimburse the Owner in full immediately.

1.2 WARRANTIES AND GUARANTEES (OTHER THAN CONTRACTOR'S)

- A. Warranties and guarantees as specified in the respective Sections for products and systems shall be in addition to the Contractor's guarantee, and shall be for such periods and with such conditions as stipulated.

1.3 BONDS

- A. The Contractor shall provide bonds as stipulated in Article 14 of the General Conditions.

END OF SECTION

GENERAL STANDARDS

PART 1 – GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary General Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SECTION INCLUDES

- A. General Standards.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Material and Equipment: Section 01600.
- B. The Specification Section for that Work.

1.3 GENERAL STANDARDS APPLICABLE TO ALL SPECIFICATION SECTIONS

- A. These provisions, standards, and tolerances shall apply to all work under this contract. Where stricter standards and tolerances are specified, they shall take precedence over these standards and tolerances.
 - 1. Some of the requirements specified in this Section are performance requirements. The Architect will cooperate in deciding how best to make the work conform to these performance requirements, and he will issue prompt interpretations and explanations of these requirements when requested to do so.
- B. Build and install parts of the work level, square, plumb, and in correct position unless specifically shown or specified elsewhere.
 - 1. No part shall be out of plumb, level, square, or correct position so much as to impair its function or that of the project.
 - 2. No part shall be out of plumb, level, square, or correct position so much as to impair the aesthetic effect of the part of the project as judged by the Architect.
 - 3. The following tolerances shall apply to plane surfaces unless stricter tolerances are specified. These tolerances shall not apply to work for which, in the Architect's interpretation, they are clearly inappropriate.
 - a) No point in the plane surface shall be out of correct position by more than 1/8".
 - b) No tangent to the plane surface shall vary from the vertical, horizontal, or other indicated plane by more than 1/2" in 12'.
- C. Make joints tight and neat. If such is impossible, apply moldings, sealant, or other closure as directed by Architect.
- D. Under potentially damp conditions, provide galvanic insulation between different metals which are not adjacent on the galvanic scale.

-
- E. All fasteners used by all trades on the exterior of the building and where dampness and corrosion can reasonably be anticipated shall be corrosion resistant.
1. Fasteners used for exterior wood trim, whether set and puttied or not, shall be stainless steel or aluminum.
 2. Fasteners for other carpentry on the exterior or in potentially damp locations shall be stainless steel, aluminum, or hot dip galvanized steel.
 3. Fasteners for copper and brass in all locations and under all conditions shall be copper or brass.
 4. Fasteners for stainless steel shall be stainless steel.
 5. Fasteners for aluminum shall be stainless steel or aluminum.
 6. Fasteners for ferrous metals shall be galvanized or stainless steel.
 7. Fasteners for other materials on the exterior of the building and where dampness and corrosion can reasonably be anticipated shall be one of the types specified above.
 8. If corrosion resistant fasteners are not available, notify Architect. Architect will direct alternative protection.
- F. Apply protective finish to parts of the work before concealing parts. For example, paint door tops and bottom before hanging doors, and paint corrosible mounting plates before installing parts over them.
1. Paint other concealed materials with same primer and finish specified for exposed surfaces. If concealed materials are fully covered, primer alone is sufficient.
 2. Concealed parts, which are already corrosion protected, need not be painted unless specified otherwise.
- G. Manufacturers, subcontractors, and workmen shall be experienced and skillful in performing the work assigned to them.
- H. Verify critical dimensions in the field before fabricating items, which must fit adjoining construction.
- I. Where accessories are required in order to install parts of the work in usable form, provide such accessories.
- J. Follow manufacturer's instructions for assembling, installing and adjusting products. Where manufacturer's instructions conflict with Contract Documents, request instructions from Architect.
- K. Adjust and operate all items of equipment, leaving them fully ready for use.
- L. All guarantees, warranties, and service maintenance agreements shall commence on the date of substantial completion of the work or the item being guaranteed, whichever is later, so that Owner receives full use of the item for the guarantee period.
- M. All materials and equipment shall comply with the Occupational Safety and Health Act as amended.

1.4 GENERAL WORK TO BE PERFORMED AS PART OF GENERAL CONDITION

- A. Seal cracks and openings so as to make exterior skin of building tight to the weather. If methods of doing so are not specified, notify Architect, and proceed as directed by the Architect.
- B. Provide adequate blocking, bracing, nailers, and fastenings to install parts of the work securely. Installed parts shall be able to withstand 2-1/2 times the maximum anticipated load as estimated by Architect. Blocking, bracing, nailers, and fastenings shall not be subject to deterioration or weakening as the result of normal environmental conditions or aging.
- C. Perform cutting and patching required for all trades. Use workmen skilled in such work. Patch holes where ducts, conduit, pipes, and other items pass through existing construction. Patch holes where ducts, conduit, pipes, and other items are removed from existing construction.
- D. Check drawings for requirements for bases, pads, and other supporting structures. Provide such supporting structures.
- E. As part of the one year warranty specified in the General Conditions, repair cracks and other faults which occur as a result of settlement and shrinkage during the first year after substantial completion. This does not include faults, which are due to abuse of the project, or abnormal faults which result from inadequate design.

1.5 REFERENCE STANDARDS

- A. Unless date is listed, reference to standard specifications shall mean latest edition of such specifications published at date of bid documents.
- B. Reference to technical society or organization is made in the Project Manual according to the abbreviations listed in Section 01090.

END OF SECTION

MORTAR AND MASONRY GROUT

PART 1 GENERAL

1.01 REFERENCES

- A. Standards:
 - 1. Mortar: ASTM C 270, except as otherwise specified.
 - 2. Grout: ASTM C 476.

1.02 SUBMITTALS

- A. Product Data:
 - 1. Portland Cement: Brand and manufacturer's name.
 - 2. Masonry Cement: Brand and manufacturer's name.
 - 3. Lime: Brand and manufacturer's name.
 - 4. Sand(s): Location of pit, name of owner, and previous test data.
 - 5. Color Pigments: Brand and manufacturer's name.
- B. LEED Submittals: Submit the following as a separate submittal package, including information on each product specified:
 - 1. Local/Regional Materials:
 - a. Sourcing location(s): Indicate location of extraction, harvesting, and recovery of raw materials used in the products manufacturing; indicate distance between extraction, harvesting, and recovery and the project site.
 - b. Manufacturing location(s): Indicate location of manufacturing facility; indicate distance between manufacturing facility and the project site.
 - 2. Recycled content: Manufacturers certification of recycled content indicating percentage by weight of both pre-consumer and post-consumer recycled content.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle materials in a manner which will insure the preservation of their quality and fitness for the Work.
- B. Store cement and lime on raised platforms under waterproof, well ventilated cover.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Cement: One of the following complying with the indicated requirements:
 - 1. Portland Cement: ASTM C 150, Type 1, of natural color or white as required to produce the desired color.
 - a. Fly Ash: Comply with ASTM C593.
 - 1) Recycled Content: Minimum 15 percent pre-consumer recycled content at contractor's option.
 - a) Type 1: 81 g, 15 percent.

2. Masonry Cement: ASTM C 91, of natural color or custom color as required to produce the desired color.
 - a. Fly Ash: Comply with ASTM C593.
 - 1.) Recycled Content: Minimum 5 percent post-consumer recycled content, or minimum 20 percent pre-consumer recycled content at contractor's option.
 - a) Type M: 27 g, 5 percent; 108 g 20 percent.
 - b) Type S: 26 g, 5 percent; 102 g, 20 percent.
 - c) Type N: 24 g, 5 percent; 96 g 20 percent.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Mortar Sand: ASTM C 144, except that for joints less than 1/4 inch thick use sand graded with 100 percent passing the No. 16 sieve.
 1. Sand for White Mortar: Natural white sand or ground white stone.
 2. Sand for Colored Mortar: Ground marble, granite, or other sound stone, as required to match approved sample.
- D. Grout Sand: ASTM C 404.
- E. Color Pigments: High purity, finely ground, chemically inert, unfading, lime proof mineral oxides specially prepared for use in mortar.
- F. Water: Clean and free of deleterious amounts of acids, alkalis, and organic materials.

2.02 MIXES

- A. Mortar for Unit Masonry: Comply with ASTM C 270, proportion specifications, except limit materials to those specified.
 1. Colored Mortar: Proportion color pigments with other ingredients as necessary to match required color, except limit pigments other than carbon black to a maximum of 10 percent of cement content by weight and limit carbon black to a maximum of 3 percent of cement content by weight.
- B. Grout: Comply with ASTM C 476. If grout types are not indicated on Drawings, furnish type (fine or coarse) most suitable for the particular job conditions to completely fill cavities and embed reinforcement and other built-in items.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Refer to sections of Specifications which require mortar and masonry grout.

3.02 MORTAR SCHEDULE

- A. Where mortar types are not indicated on Drawings or specified, use types as follows:
1. Type M for unit masonry below grade in contact with fill materials.
 2. Type S for concrete masonry units.
 3. Type N for brick masonry units.
 - a. Proportion Portland cement, lime, and sand in a 1:1:6 ratio.

END OF SECTION

UNIT MASONRY

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Masonry Restoration: Section 040121.
- B. Building Insulation: Section 072100.

1.02 SUBMITTALS

- A. Shop Drawings: Submit shop drawings for precast concrete lintels.
- B. Product Data:
 - 1. Mortar:
 - a. Portland Cement: Brand and manufacturer's name.
 - b. Masonry Cement: Brand and manufacturer's name.
 - c. Lime: Brand and manufacturer's name.
 - d. Sand: Location of pit, name of owner, and previous test data.
 - e. Color Pigments: Brand and manufacturer's name.
 - 2. Masonry Wall Reinforcement: Catalog sheets and specifications.
- C. Samples:
 - 1. Brick: 12, each type, showing full range of color/shading and texture.
 - 2. Existing Brick to be Matched: 6, each type, for comparison to above.
 - 3. Concrete Masonry Units: 6, each size.
 - 4. Masonry Wall Reinforcement: 24 inch long sections.
- D. Quality Control Submittals:
 - 1. Test Reports:
 - a. Brick: At the written request of the Director, submit certified test reports for each type of brick showing compressive strength, 24 hour cold water absorption, 5 hour boiling water absorption, saturation coefficient, and initial rate of absorption (suction).
 - b. Concrete Masonry Units: Submit certified test reports for each size showing that units for delivery to the Project meet the requirements of these Specifications.

1.03 PROJECT CONDITIONS

- A. Environmental Requirements:
 - 1. Protect masonry and materials against freezing at temperatures below 40 degrees F.
 - 2. Do not use frozen materials or materials coated with ice or frost.
 - 3. Do not lower freezing point of mortar by use of antifreeze agents or other admixtures. Do not use calcium chloride in mortar.

PART 2 PRODUCTS

2.01 FACING BRICK

- A. Ground Faced Block (Exterior): ASTM C 216, Grade SW, Type FBS.
 - 1. Size, Color, and Texture: Westbrook Block – GF224
- B. Special Molded Shapes: Furnish for applications where units cannot be sawn from standard sizes.

2.02 CONCRETE MASONRY UNITS

- A. Hollow Load-Bearing Units: ASTM C 90, Type I.
- B. Solid Load-Bearing Units: ASTM C 90, Type I.
- C. Hollow Non-Load-Bearing Units: ASTM C 129, Type I.
- D. Concrete Building Brick: ASTM C 55, Type I, Grade N.
- E. Fire Rated Units: Aggregate type and equivalent solid thickness as required to obtain the fire resistance rating indicated. Fire resistance ratings shall be based on fire tests in accordance with ASTM E 119.
- F. Aggregate:
 - 1. Lightweight Units: ASTM C 331; dry net weight not more than 105 lb per cu ft.
 - 2. Normal Weight Units: ASTM C 33; dry net weight not less than 125 lb per cu ft.
- G. Special Shapes: Units of shape and size required for lintels, corners, jambs, sash, control joints, headers, bonding, and other special conditions indicated.
 - 1. Outside Corners: Square edge units.
 - 1. Outside Corners: Bullnose units.
 - 2. Units for Walls and Partitions to be Filled with Loose Type Insulation: Two cell (core) units.

2.03 MORTAR AND MASONRY GROUT

- A. Mortar: ASTM C 270, proportion specifications. Types as follows:
 - 1. Type M for unit masonry below grade in contact with fill materials.
 - 2. Type S for concrete masonry units.
 - 3. Type N for brick masonry units.
 - a. Proportion Portland cement, lime, and sand in a 1:1:6 ratio.
- B. Color Pigments: High purity, finely ground, chemically inert, unfading, lime proof mineral oxides specially prepared for use in mortar.
 - 1. Proportion color pigments with other ingredients in mortar as necessary to match color of existing adjacent mortar joints.

- C. Grout: ASTM C 476, fine or coarse as most suitable for the particular job conditions.

2.04 ACCESSORIES

- A. Masonry Wall Reinforcement: Joint reinforcement factory fabricated from cold-drawn steel wire, truss or ladder design, 9 gage deformed steel wire longitudinal rods welded to 9 gage steel wire cross ties spaced 16 inches on center; width 1-1/2 to 2 inches less than wall thickness. Furnish factory-fabricated corner and tee sections for corners and wall intersections.
1. Finish for Exterior Walls: 1.5 oz per sq ft hot dipped galvanized after fabrication.
 2. Finish for Interior Walls: 0.8 oz per sq ft mill galvanized.
 3. Cavity Wall Construction: Ladder design fabricated with drip notch in cross ties centered over the cavity.
 4. For walls with concrete masonry unit back-up wythe, reinforcement shall have a third longitudinal rod located for proper embedment at internal face shell of concrete masonry units.
 5. Provide units with adjustable 2-piece rectangular ties where horizontal joints of facing wythe do not align with those of back-up.
- B. Bar Reinforcement: ASTM A 615, Grade 60, deformed steel bars.
1. Rebar Positioner: Fabricate from galvanized steel wire, 9 gage or 6.5 gage as required. Design to fit concrete masonry units, and number, size and location of rebars indicated. Products; Steel-Wich Telescoping Rebar Positioner™, P. O. Box 1936, Buffalo, NY 14240, (716) 683-7526; or No. 376, 377 by Heckmann Accessories, 4015 West Carroll Avenue, Chicago, IL 60624, (800) 621-4140.
- C. Buck Anchors (For Anchoring New Masonry To Existing Construction): 1-1/4 x 1/8 x 8 inch long Z type steel buck anchor with 2 inch long right angle bent ends, bolt hole in one bent end, 1.5 oz per sq ft hot dipped galvanized after fabrication. Furnish 3/8 inch diameter galvanized machine bolt and nonferrous metal expansion shield.
- D. Continuous Steel Angle (For Anchoring New Masonry to Existing Masonry): Continuous galvanized steel angles of sizes indicated with holes spaced 18 inches on center. Furnish galvanized steel anchors of sizes and types indicated or required.
- E. Masonry Veneer Anchors: Corrugated wall ties, 22 gage steel, 7/8 inch wide, 7 inches long, 1.5 oz per sq ft hot dipped galvanized after fabrication.
- F. Flexible Anchors: 1.5 oz per sq ft hot dipped galvanized steel anchors which will permit horizontal and vertical movement of masonry but will maintain lateral restraint, and as follows:
1. For Anchorage To Concrete Framework: 2 piece anchors with 12 gage sheet steel dovetail section and rectangular or vee-shaped 3/16 inch diameter wire tie section sized to extend to within one inch of face of masonry.
 2. For Anchorage To Steel Framework: 2 piece anchors with crimped 1/4 inch diameter bar for welding to steel and rectangular or vee-shaped 3/16

inch diameter wire tie section sized to extend to within one inch of face of masonry.

- G. Dovetail Anchor Slot Concrete Inserts: 24 gage galvanized steel, with filler strip; slot sized to fit dovetail anchor.
- H. Unit-Type Concrete Inserts: Cast iron or malleable iron, or fabricated 12 gage steel with 1.5 oz per sq ft hot-dip zinc coating.
- I. Masonry Wall Ties: 3/16 inch diameter cold-drawn steel wire, with 1.5 oz per sq ft hot-dip zinc coating after fabrication; Z-shaped for solid unit masonry, rectangular shape for hollow unit masonry; 2 piece adjustable type where wythe courses are not aligned.
- J. Tiebars: 1-1/4 x 1/4 x 28 inch long steel bars with 3 inch long right angle bent ends, 1.5 oz per sq ft hot dipped galvanized after fabrication. Adjust length of bars as required when obstructions are encountered.
- K. Metal Lath: Galvanized, expanded metal lath weighing not less than 3.4 pounds per square yard.
- L. Hardware Cloth: 16 gage, 1/2 inch square mesh, galvanized steel wire mesh.
- M. Premolded Control Joint Strips: Solid rubber strips of profile indicated (to maintain lateral stability of wall); 60-80 Shore A durometer hardness.
- N. Asphalt Felt (For Mortar Control Joints): No. 15 asphalt saturated organic felt; ASTM D 226.
- O. Clay Flue Lining: ASTM C 315.
- P. Masonry Flashing: Copper fabric consisting of 7 oz copper sheet with asphalt impregnated glass fabric bonded to both sides.
 - 1. Joint Sealant: Trowel grade asphalt roofing cement.

2.05 SOURCE QUALITY CONTROL

- A. Tests:
 - 1. Test brick in accordance with ASTM C 67.
 - 2. Test concrete masonry units in accordance with ASTM C 140 and ASTM C 426.
 - 3. Have tests performed by a qualified independent testing laboratory.

PART 3 EXECUTION

3.01 PREPARATION

- A. Lay out walls and partitions with one course of unit masonry, or other suitable means, to define the spaces, locations of doors and other openings, and to serve as a guide for other trades in the installation of conduits, pipes, etc.

- B. Allow other trades sufficient opportunity to install built-in work before proceeding with the walls and partitions. Do not cover pipes, conduit, or ductwork in masonry until directed by the Director's Representative.
- C. Wet brick that absorb 20 drops of water (placed in a one inch circle) in less than 90 seconds.
- D. Clean off supporting surface under first course of masonry just prior to laying the masonry units.
- E. Protection:
 - 1. Protect face materials against staining.
 - 2. Protect newly laid masonry from exposure to precipitation, excessive drying, freezing, soiling, backfill, and other harmful elements.
 - 3. Cover top of walls with non-staining waterproof covering when Work is not in progress. Place with minimum 2 foot overhang of protective covering on each side of wall and securely anchor.

3.02 INSTALLATION

- A. Install masonry units plumb and true to line with level courses accurately spaced.
 - 1. Install masonry units in running bond unless otherwise indicated.
 - 2. Install masonry units in existing masonry bond pattern. Match existing unit masonry coursing and joints.
 - 3. Take special care when laying masonry units to be left exposed, or upon which high-build glazed coating, paint, or thin set tile will be applied. Surface plane tolerance for such Work: 1/8 inch in 10 feet in all directions.
- B. Adjust units to final position while mortar is soft and plastic. Remove units disturbed after mortar has stiffened; clean units and joints of mortar and re-lay in fresh mortar.
- C. Lay only dry concrete masonry units.
- D. Where cutting of masonry units is necessary, cut with a power saw. Lay out Work to avoid use of less than half-size units.
- E. Lay hollow units with full mortar coverage on horizontal and vertical face shell surfaces. Bed webs in mortar in starting course on footings and foundation walls, in all courses of piers, columns and pilasters, where adjacent to cells or cavities to be reinforced or filled with concrete or mortar, and within 1'-6" of each side of openings.
- F. Lay solid units with full mortar coverage on horizontal and vertical joint surfaces.
- G. Collar Joints: Except in cavity walls, fill vertical-longitudinal joint between wythes by slushing and rodding the joint full of mortar.
- H. Cavity Wall Construction: Keep cavities clean of mortar droppings.

3.03 JOINTS

- A. Construct uniform mortar joints, 3/8 inch thick unless otherwise indicated.
- B. Strike joints flush in surfaces to be plastered, stuccoed, or covered with other masonry or other surface applied finish other than smear and high-build glazed coating.
- C. Cut joints flush and tool slightly concave on both sides of other walls and partitions, including inner wythe of exterior cavity walls.

3.04 HORIZONTAL JOINT REINFORCEMENT

- A. Reinforce horizontal joints with continuous masonry wall reinforcement spaced every 16 inches vertically except as follows:
 - 1. Space 8 inches vertically in parapet walls.
 - 2. Also reinforce horizontal joints immediately above and below openings for a distance of 2'-0" beyond opening in both directions.
- B. Do not bridge control joints or expansion joints with reinforcement.
- C. Lap ends of adjoining strips of reinforcement 6 inches or more.
- D. Install factory fabricated corner and tee sections at corners and wall intersections respectively.

3.05 TYING ADJACENT WYTHES

- A. Tie adjacent wythes of masonry walls together with continuous masonry wall reinforcement spaced vertically not more than 16 inches on center. Install reinforcement as specified under HORIZONTAL JOINT REINFORCEMENT.
- A. Tie adjacent wythes of masonry walls together with masonry wall ties spaced 16 inches vertically and 24 inches horizontally.

3.06 BONDING WITH MASONRY

- A. Lay masonry units in masonry bond for the following:
 - 1. External corners of partitions and walls.
 - 2. Pilasters, piers, and columns.
 - 3. Intersections of walls and partitions with a door opening within one foot of intersection. Fill cells between the intersection and the door frame with mortar to the full height of the door.

3.07 TYING INTERSECTING WALLS AND PARTITIONS

- A. Except where masonry bond is specified, terminate abutting walls and partitions flush against the face of the abutted walls. Tie intersections at every second course as follows:
 - 1. Load-Bearing Walls: Install tiebars. Embed bent ends in cells filled with mortar. Install pieces of metal lath under the cells to support the mortar fillings.

2. Non-Load-Bearing Walls: Install ties of masonry wall reinforcement tee sections or strips of hardware cloth embedded in mortar.
 - a. Center standard length masonry wall reinforcement tee sections on the walls.
 - b. Width of hardware cloth strips shall be the width of the abutting wall less 1-1/2 inches; length shall be 24 inches or twice the width of the abutted wall, whichever is greater. Center the strips on the abutting wall and extend across intersection to 3/4 inch from the farthest face of the abutted wall.
- B. Fill vertical joint at intersection of abutted walls and partitions solid with mortar. If a control joint is located at the intersection, rake out both sides of joint to a depth of 3/8 inch.

3.08 ANCHORING

- A. Anchor walls adjoining or intersecting structural framing, and dependent upon structural framing for lateral support, to structural members with flexible anchors secured to structural members.
 1. Space flexible anchors 16 inches on center, unless otherwise shown on the Drawings.
- B. Anchoring Partitions and Infill Abutting Existing Construction: Install buck anchors in bed joints 16 inches on center vertically. Embed one bent end in cell filled with mortar and expansion bolt other bent end to existing construction.
- C. Anchoring Partitions and Infill Abutting Existing Construction: Install continuous steel angle anchored to existing construction 18 inches on center. Break portion of web in new concrete masonry unit to fit into steel angle. Prevent bond to angle. Fill core of concrete masonry unit at angle with grout.
- D. Anchoring Masonry Veneer: Install one anchor for each 4 sq ft of wall area. Space anchors not more than 24 inches horizontally and vertically. Embed anchors at least 2 inches in horizontal joint of facing. Install additional anchors around openings; place anchors within 12 inches of opening, spaced at not more than 24 inch centers around perimeter.

3.09 CONTROL AND EXPANSION JOINTS

- A. Install control and expansion joints at locations indicated. Keep joints free of mortar and debris.

3.10 WEEP HOLES

- A. Form weep holes in exterior wythe of cavity walls by leaving head joint free and clean of mortar, and raking out bed joint at weep hole. Form weep holes approximately 24 inches on center along bottom of cavity over foundations, bond beams, through wall flashings, and other water-stops in the wall. Keep weep holes free of mortar droppings.

3.11 BUILT-IN WORK

- A. Avoid cutting and patching.
- B. Build-in bolts, anchors, nailing blocks, inserts, frames, vents, flashings, conduit and other items as masonry work progresses.
- C. Fit masonry units closely around built-in items. Fill voids around built-in items with mortar for anchorage. Solidly fill space between masonry and metal frames with mortar.
- D. Unless otherwise shown on the Drawings, construct 1/4 inch to 3/8 inch wide open joint around outside perimeter of exterior door and window frames and other framed exterior wall openings to receive sealant. Rake joints and tool smooth to a uniform depth of 1/4 inch.
- E. Flashings: Clean contact surfaces and remove projections which might puncture the flashing. Place flashing on bed of mortar and cover with mortar. Seal joints with joint sealant.

3.12 LINTELS

- A. Install lintels over openings in masonry. Center lintel over opening. Set in full bed of mortar under each end.

3.13 CLEANING

- A. Cut off mortar projections remaining from tooling joints and dry-brush masonry before the end of each day's work.
- B. Additional Cleaning for Brickwork:
 - 1. Clean with stiff brushes and water.
 - 2. If staining or soiling persists, reclean with stiff brushes and a solution of trisodium phosphate, detergent, and water (1/2 cup of trisodium phosphate and 1/2 cup of detergent to each gallon of water). Rinse with clean water.
 - 3. If the above methods are unsuccessful, as judged by the Director's Representative, reclean with an approved (determined by a sample area test) liquid masonry cleaning agent in accordance with the manufacturer's instructions.

3.14 SCHEDULE FOR CONCRETE MASONRY UNITS

- A. Unless shown otherwise on the Drawings, use the various kinds of concrete masonry units specified at the locations indicated below:
 - 1. Hollow Load-Bearing Units (Normal Weight):
 - a. Use for exposed exterior Work.
 - b. Use for Work in which the same masonry units are exposed on both the interior and exterior.
 - 2. Hollow Load-Bearing Units (Lightweight):
 - a. Use for interior bearing walls, pilasters, piers, and columns, and for interior wythe of exterior bearing walls.
 - 3. Solid Load-Bearing Units (Lightweight):
 - a. Use for stair enclosures, pipe shafts, ventilator shafts, elevator shafts, and dumbwaiter shafts.

- b. Use for walls supporting wall-hung plumbing fixtures.
 - c. Use for enclosing refrigerator spaces. Fill cells completely with mortar or provide 100 percent solid units.
- 4. Hollow Non-Load-Bearing Units (Lightweight):
 - a. Use for interior Work including wall backing, except as otherwise specified above.

END OF SECTION

SHOP-APPLIED COATINGS FOR METAL

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Metal Fabrications: Section 055000.

1.02 DEFINITIONS

- A. Galvanizing: The act of coating steel with zinc in order to provide barrier and cathodic protection from corrosion.
- B. Duplex systems: Galvanized steel that has been coated with an additional corrosion-inhibiting product, typically liquid or powder paint; the two separate coating systems work synergistically to provide enhanced corrosion protection.
- C. Passivation: Changing chemically active metal surfaces to a much less reactive state (see phosphating).
- D. Phosphating: Forming an adherent phosphate coating on a metal by immersion in a suitable aqueous phosphate solution, commonly used to promote better adhesion of paint to galvanized steel

1.03 QUALITY ASSURANCE

- A. Reference Standards:
 - 1. American Galvanizers Association (AGA): Protecting Steel for Generations 2002.
 - 2. American Hot Dip Galvanizers Association, Inc. (AHDGA): Publication Entitled, "Inspection Manual for Hot Dip Galvanized Products".
 - 3. American Society for Testing and Materials (ASTM):
 - a. A 123/A 123M – 02 Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - b. A 153 – 05 Zinc Coating (Hot Dip) on Iron and Steel Hardware.
 - c. A 780 Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.
 - d. D 6386 – 99 Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting.
- B. Visual Stamp: The galvanizer shall tag all material with a clearly visible stamp indicating the name of the galvanizer, the weight of the Zinc coating, and the applicable ASTM specification.

1.04 SUBMITTALS

- A. Certification: Furnish Certificates of Compliance with ASTM Specifications, and Standards specified herein. Each certificate shall be signed by Contractor and Galvanizer certifying that steel materials, bolts, nuts, washers, and items of iron and steel hardware conform with specified requirements, and that the galvanizing and paint top coats are in full conformance with these specifications.

1. Operation and Maintenance Data: Deliver 2 copies, covering the installed products, to the Director's Representative.

- B. Samples: Submit two 3 inch by 6 inch samples of factory applied coatings and colors.

1.05 PRODUCT DELIVERY, STORAGE, AND HANLING

- A. Packaging: Of type to prevent damage to galvanized and painted surfaces and distortion of steel materials and components.
- B. Handling and Storage: Conform to ASTM A-123. Protect galvanized materials from damage to zinc coating and paint coating during handling. Space surfaces of galvanized and painted materials to permit free circulation of air, during storage.

1.06 WARRANTY

- A. Provide 20 year warranty against rust and 5 year warranty against coating failure.

PART 2 PRODUCTS

2.01 ZINC FOR GALVANIZING

- A. Conform with ASTM B-6, as specified in ASTM A-123.

2.02 ACCEPTABLE GALVANIZING-SHOP PAINT PROVIDERS

- A. Hubbell Galvanizing, New York Mills, NY 13417, (800) 244-4258, www.hubbellgalvanizing.com.
- B. Duncan Galvanizing, Everett, MA 02149, (800) 638-1011, www.duncangalvanizing.com.
- C. V&S Taunton Galvanizing LLC, Taunton, MA 02780, 508-828-9499, taunton@hotdipgalvanizing.com.
- D. V&S Lebanon Galvanizing LLC, Lebanon, PA 17038, 717-861-7777, lebanon@hotdipgalvanizing.com.

2.03 GALVANIZING

- A. Before hot dip galvanizing, thoroughly clean steel fabrications in both alkaline and acid baths.
- B. Steel members, fabrications, and assemblies shall be galvanized after the cleaning process by hot dip process in accordance with ASTM A-123. Weight of zinc coating shall conform to requirements, specified under "Weight of Coating" in ASTM A-123 of ASTM A-386, as applicable.
- C. Safeguard against steel embrittlement in conformance with ASTM A-143.

- D. Finish and uniformity of zinc coating and adherence of coating shall conform to ASTM A-123.
- E. Bolts, nuts, and washers and iron and steel hardware components shall be galvanized in accordance with ASTM A-153. Weight of zinc coating shall conform to the requirements specified under "Weight of Coating" in ASTM A-153. Nuts shall be tapped after galvanizing to diametral amounts specified in ASTM A-563.
- F. Prepare galvanized products for painting in accordance with ASTM D 6386.

2.04 PRESERVATIVE OILS

- A. Do not treat galvanized or passivated surfaces with oils, grease, or chemicals other than those specified.

2.05 POWDER COATING OF GALVANIZING

- A. Type G-1 Finish: Provide color coating of hot-dipped galvanized materials in the galvanizer's own plant, within 36 hours of galvanizing. Apply pretreatment by an air less electrostatic spray to a dry thickness of .25 to .33 mils and a top coat applied in a similar manner to a minimum dry film thickness of 2.5 mils. Dry film hardness shall be at least 2H or greater. Apply all paint material in a suitably designed paint spray booth capable of controlling environmental conditions. Do not apply when the air, steel or paint temperature is below 50 degrees F or when the humidity exceeds 70 percent. Cure coating in an oven at 500 degrees F minimum.
- B. Acceptable Products:
 - 1. POWDURA Polyester Powder Coat by The Sherwin-Williams Company.
 - 2. Series 38 Super durable by TIGER Drylac, USA, Inc.
 - 3. ENVIROCRON Powder Coat PCU STANDARD by PPG Industries.
 - 4. TGIC Polyester by The Valspar Corporation.
- C. Color: Semi-Gloss Black.

PART 3 EXECUTION

3.01 INSTALLATION AND STEEL MATERIALS

- A. Steel materials, fabrications, and assemblies are specified to be installed in the Section listed under 1.01A and as noted on the drawings.
 - 1. See drawings for steel products requiring a hot-dip galvanized and Type G-1 finish.

3.02 FIELD INSPECTION

- A. Inspect installed galvanized materials, fabrications, and assemblies to conform to applicable requirements of AHDGA "Inspection Manual for Hot Dip Galvanized Products", consisting of visual inspection.

3.03 TOUCH UP AND REPAIR

- A. Repair damaged galvanized surfaces by the following method:
 - 1. Over wire brushed surface, apply 95 percent (by weight) organic zinc rich paint in accordance with ASTM A 780.
- B. Dry film thickness of applied repair paint to be not less than galvanized coating thickness required by ASTM A-123, A-153 or A-386 as applicable.

END OF SECTION

ROUGH CARPENTRY

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Heavy Timber Construction: Section 061323.
- B. Wood Trusses: Section 061753.
- C. LEED Requirements: Section 018113

1.02 REFERENCES

- A. Standards: Comply with the following unless otherwise specified or indicated on the Drawings:
 - 1. Lumber: American Softwood Lumber Standard PS 20 by the U.S. Department of Commerce. Comply with applicable provisions for each indicated use.
 - 2. Plywood: Product Standard PS 1 for Softwood Plywood, Construction and Industrial by the U.S. Department of Commerce.
 - 3. Plywood Installation: APA Design/Construction Guide, Residential & Commercial by the American Plywood Association (APA).
 - 4. Grading Rules:
 - a. Douglas Fir, Hem-Fir, Idaho White Pine, and other Western Woods: Western Wood Products Association (WWPA) or West Coast Lumber Inspection Bureau (WCLIB).
 - b. Southern Pine: Southern Pine Inspection Bureau (SPIB).
 - c. Redwood: Redwood Inspection Service (RIS).
 - d. Spruce-Pine-Fir: National Lumber Grades Authority (NLGA).
 - 5. User Specification for Treated Wood, American Wood Protection Association Standard (AWPA) U1-02
 - 6. Framing Installation: American Forest and Paper Association (AFPA).
 - 7. LEED Certification: Forest Stewardship Council (FSC) Principles and Criteria

1.03 SUBMITTALS

- A. Quality Control Submittals:
 - 1. Certificates: Certification for the following wood treatments:
 - a. Dip Treatment: Certification by treating plant stating chemical solutions used, submersion period, and conformance with applicable standards.
 - b. Pressure Treatment: Certification by treating plant stating chemicals and process used, net amount of chemical preservative retained, and conformance with specified standards.
 - c. Waterbourne Preservatives: Certified written statement that moisture content of treated materials was reduced to a maximum of 19 percent prior to shipment to Project site.
 - d. Fire-Retardant Treatment: Certification by treating plant stating treated material complies with specified standards and treatment will not bleed through specified finishes.

- B. LEED Design Submittals:
1. MR Credit 5.1 and MR Credit 5.2: Identify source, cost, and the fraction by weight that is considered regional.
 2. MR Credit 6: Identify the manufacturer's name, the rapidly renewable content of the product submitted and the cost of the product.
 3. MR Credit 7: Identify manufacturers' name(s), percentage of FSC Certified Content, total cost of FSC Certified materials installed on the project, total cost of wood installed on the project, and provide Chain of Custody Documentation for each FSC certified product installed on the project.
 4. EQ Credit 4.4: Identify each composite wood and agrifiber products installed in the building interior and document that it does not have any added urea-formaldehyde. Provide a narrative description of any special circumstances or non-standard compliance paths taken.

1.04 QUALITY ASSURANCE

- A. Mill and Producers Mark: Each piece of lumber and plywood shall be gradestamped indicating type, grade, mill, and grading agency certified by the Board of Review of the American Lumber Standards Committee. Mark shall appear on unfinished surface, or ends of pieces with finished surfaces.
1. Pressure Preservative Treated Material: Accredited agency quality mark on each piece of wood indicating treatment.
 2. Fire-Retardant Treated Material: Accredited testing agency mark on each piece of wood indicating compliance with the fire hazard classification.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Keep materials dry during delivery. Store materials 6 inches minimum above ground surface. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and plywood, and provide air circulation between stacks.
- B. Cover stored materials until ready for use for protection from moisture. Place and anchor covering in a manner which will assure good ventilation under the covering.

1.06 PROJECT CONDITIONS

- A. Correlate location of supporting members to allow proper attachment of other Work.

PART 2 PRODUCTS

2.01 LUMBER

- A. General: Furnish FSC certified wood products only, with all pieces stamped with the FSC Label. Furnish seasoned dimension lumber dressed to nominal sizes indicated with 19 percent maximum moisture content at time of dressing, marked "S-DRY". Comply with dry size requirements of PS 20.

1. Dress: Surfaced 4 sides (S4S) unless otherwise indicated.
- B. General: Furnish seasoned dimension lumber dressed to nominal sizes indicated with 19 percent maximum moisture content at time of dressing, marked "S-DRY". Comply with dry size requirements of PS 20.
 1. Dress: Surfaced 4 sides (S4S) unless otherwise indicated.
- C. Framing Lumber: Species: Douglas Fir or Hem-Fir (WWPA or WCLIB), Southern Pine (SPIB), Redwood (RIS), or Spruce-Pine-Fir (NLGA) unless otherwise indicated.
 1. Light Framing; 2 inches through 4 inches thick, less than 6 inches wide:
 - a. Standard and Better grade.
 - b. Standard grade.
 - c. Utility grade.
 - d. Stud grade lumber for stud framing and Standard grade lumber for other light framing.
 2. Structural Framing; 2 inches through 4 inches thick, 6 inches and wider:
 - a. Select Structural grade.
 - b. No. 1 grade.
 - c. No. 2 grade.
 - d. No. 3 grade.
 3. Exposed Framing; 2 inches through 4 inches thick: Furnish the following species and grade where framing will not be concealed by other Work:
 - a. Douglas Fir, Select Structural grade (WWPA or WCLIB).
 - b. Southern Pine, Select Structural grade (SPIB).
 - c. Douglas Fir, Appearance grade (WWPA or WCLIB).
 - d. Southern Pine, Appearance grade, kiln dried (SPIB).
 - e. Redwood, Clear All Heart (RIS).
 - f. Spruce-Pine-Fir, Appearance grade (NLGA).
- D. Board Lumber; less than 2 inches thick:
 1. Exposed Board Lumber, for Paint Finish: Southern Pine No. 1 (SPIB), Douglas Fir 2 Common (WWPA) or Select Merchantable (WCLIB), Redwood Construction Common (RIS), or Spruce-Pine-Fir No. 1 / No. 2 (NLGA).
 2. Exposed Board Lumber, for Transparent Finish: Redwood Clear (RIS).
 3. Concealed Board Lumber: Southern Pine No. 3 (SPIB), any species No. 4 (WWPA) or any species Standard (WCLIB), Redwood Merchantable (RIS), or Spruce-Pine-Fir No. 1 / No. 2 (NLGA).
- E. Miscellaneous Lumber: Standard grade, No. 3 grade, or better grade of the following species unless otherwise indicated:
 1. Nailers and Blocking: Douglas Fir, Hem-Fir, Idaho White Pine, Southern Pine, or Spruce-Pine-Fir.
 2. Furring: Douglas Fir, Southern Pine, or Spruce-Pine-Fir.
 3. Plaster Grounds:
 - a. Interior Use: Douglas Fir, Southern Pine, or Spruce-Pine-Fir.
 - b. Exterior Use: Western Red Cedar or Redwood.
 4. Floor Sleepers: Western Red Cedar or Redwood Construction Heart.
 5. Door Bucks: Western Red Cedar or Redwood.

2.02 PLYWOOD

- A. Sheathing and Subflooring: APA RATED SHEATHING, EXPOSURE 1. Furnish APA PS 1 veneered panels, with span ratings for the required thicknesses as listed below unless otherwise indicated.

THICKNESS	SPAN RATING
3/8 inch	24/0
1/2 inch	32/16
5/8 inch	40/20
3/4 inch	48/24

- B. Underlayment: APA UNDERLAYMENT, EXPOSURE 1.
1. For use under resilient tile flooring and resilient sheet flooring: Sanded face.
 2. For use under carpet and "liquid" flooring: Touch-sanded.

2.03 PARTICLEBOARD

- A. Underlayment: ANSI A 208.1, Type 1, Density Range M (40 lb/cu ft minimum average).

2.04 HARDBOARD

- A. Hardboard: PS 58, Class "Tempered", S1S, plain board.

2.05 MISCELLANEOUS MATERIALS

- A. Underlayment Patching Compound: Hardsetting, quicksetting type with latex or polyvinyl acetate binder.
- B. Asphalt Felt: Asphalt-saturated felt, No. 15, without perforations, complying with ASTM D 226.
- C. Rosin Paper: Commercial, rosin-sized building paper, 0.010 inch thick.

2.06 PRESERVATIVE TREATMENT

- A. Treat lumber and plywood where indicated and as specified. Comply with applicable AWPA U1 Standards and quality control and inspection requirements.
1. Fasteners and anchoring devices to be used with wood treated with waterbourne preservatives shall be hot-dipped galvanized or stainless steel if the wood will be exposed to moisture.
- B. Complete fabrication of items to be treated to the greatest extent possible prior to treatment. Where items must be cut after treatment, coat cut surfaces with heavy brush coat of the same chemical used for treatment or other solution recommended by AWPA Standards for the treatment.
- C. Inspect wood after treating and drying. Discard warped or twisted items.

- D. Wood Treatment: Compatible with galvanized metal connector plates, unless other compatible protective finish for connector plates is approved by the Director for use with approved treatment.
 - 1. Preservative Treatment: Category UC3A for Exterior Construction above Ground; coated and exposed to rapid water runoff.
 - 2. Preservative Treatment: Category UC3B for Exterior Construction above Ground; uncoated and exposed to poor water runoff.
 - 1. Nailers, blocking, cants, shim stock, and similar members used in conjunction with roofing (including related flashings, trim and vapor barrier), coping, and waterproofing.
 - 2. Nailers, blocking, furring, stripping, and similar concealed members in contact with exterior masonry and concrete (including interior wythe of exterior walls), and all sills for framing.
 - 3. Wood items indicated or scheduled on the Drawings to be preservative treated.
- E. Wood Treatment: Compatible with galvanized metal connector plates, unless other compatible protective finish for connector plates is approved by the Director for use with approved treatment.
 - 1. Preservative Treatment: Category UC4A for Ground Contact or Freshwater; Non-critical components.
 - 2. Preservative Treatment: Category UC4B for Ground Contact or Freshwater; Critical components or difficult replacement.
 - 3. Preservative Treatment: Category UC4C for Ground Contact or Freshwater; Critical structural components.

2.07 FIRE-RETARDANT TREATMENT

- A. Furnish "FR-S" lumber where indicated, complying with AWPA U1 Standards for pressure impregnation with fire-retardant chemicals to achieve a flamespread rating of 25 or less, when tested in accordance with UL Test 723, ASTM E 84 or NFPA Test 255.
 - 1. Where treated items are indicated to receive a transparent or paint finish, use a fire-retardant treatment which will not bleed through or adversely affect bond of finish.
 - 2. Provide UL label or identifying mark on each piece of fire-retardant lumber.
 - 3. Redry treated items to a maximum moisture content of 19 percent after treatment.

2.08 FRAMING HARDWARE

- A. Fasteners and Anchoring Devices: Select and furnish items of type, size, style, grade, and class as required for secure installation of the Work. Items shall be galvanized for exterior use. Items exposed to treated wood shall be Hot-Dip galvanized conforming to ASTM Standard A653; Class G-185. Unless shown or specified otherwise, comply with the following:
 - 1. Nails and Staples: FS FF-N-105.
 - 2. Wood Screws: FS FF-S-111.
 - 3. Bolts and Studs: FS FF-B-575.
 - 4. Nuts: FS FF-N-836.
 - 5. Washers: FS FF-W-92.
 - 6. Lag Bolts or Lag Screws: FS FF-B-561.

7. Masonry Anchoring Devices: Expansion shields, masonry nails and drive screws: FS FF-S-325.
8. Toggle Bolts: FS FF-B-588.
9. Bar or Strap Anchors: ASTM A575 carbon steel bars.
10. Wall Plugs: Corrugated type, galvanized steel, 24 USS gage min, not less than 2 inches wide x 2-1/2 inches deep.
11. Cross Bridging: Nailable type, galvanized steel, 16 USS gage min, by 3/4 inch wide.
12. Metal Hangers and Framing Anchors: Size and type for intended use, galvanized finish, manufacturer's recommended fasteners. Items exposed to treated wood shall be Hot-Dip galvanized conforming to ASTM Standard A653; Class G-185 and epoxy coated in the field.
13. Buck Anchors: Corrugated type, galvanized steel not lighter than 12 USS gage min, 4 inches wide (except where partitions are less than 4 inches thick) by 8 inches long, punched for two 5/16 inch carriage bolts at buck end..

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Examine substrate and supporting structure on which rough carpentry is to be installed for defects that will adversely affect the execution and quality of the Work. Do not proceed with installation until unsatisfactory conditions are corrected.

3.02 INSTALLATION - GENERAL

- A. Do not use units of material with defects which impair the quality of the Work and units which are too small to fabricate the Work with minimum joints or with optimum joint arrangement.
- B. Install Work accurately to required lines and levels with members plumb and true, accurately cut and fitted and securely fastened. Closely fit rough carpentry to other associated construction.
- C. Securely attach carpentry Work to substrates by anchoring and fastening as indicated or, if not indicated, as required by the referenced standards. Select fasteners of size that will not penetrate through members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required. Set nail heads in exposed Work which is to be painted or stained and fill resulting holes.
- D. Treated Wood: Apply heavy brush coat of treatment material to field cut surfaces.

3.03 WOOD FRAMING

- A. Install framing members of nominal sizes indicated or of units built-up to dimensions indicated, on spacings shown. Unless otherwise indicated, comply with the recommendations of the AFPA "Manual for Wood Frame Construction".

Construct required openings for installation of related work. Do not splice structural members between supports.

- B. Anchor and nail members as indicated. If not indicated, comply with the "Recommended Nailing Schedule - Table 1" of the "Manual for Wood Frame Construction" and other applicable recommendations of the AFPA.
- C. Install miscellaneous blocking and framing indicated and as required for attachment and support of facing materials, fixtures, specialty items, and trim.
- D. Firestop concealed spaces with wood blocking not less than 2 inches thick, if not blocked by other framing members. Install blocking at each building story level and at ends of each joist.
- F. Joist Framing: Install framing of sizes and on spacings shown. Install with crown edge up and support ends of each member with not less than 1-1/2 inches of bearing on wood or metal, or 3 inches on masonry. Attach to wood bearing members by toe nailing or metal connectors; frame to wood supporting members with wood ledgers or with metal connectors. Fire-cut members built into masonry (if any). Frame openings with headers and trimmers supported by metal joist hangers; double headers and trimmers where span of header exceeds 4 feet. Do not notch in middle third of joists; limit notches to 1/6-depth of joist, 1/4 at ends. Do not bore holes larger than 1/3-depth of joist or locate closer than 2 inches from top or bottom. Install solid blocking (2 inches thick by depth of joist) at ends of joists unless nailed to header or band member.
 - 1. Lap members framing from opposite sides of beams, girders or partitions not less than 4 inches or securely tie opposing members together. Install solid blocking (2 inches thick by depth of joist) over supports.
 - 2. Anchor masonry bearing members with 1/4 x 1-1/4 inch metal strap or "T" anchors with wall ends bent 4 inches at every second joist. Extend anchors not less than 1'-4" along bottom of joist end and nail.
 - 3. Anchor members paralleling masonry with 1/4 x 1-1/4 inch metal strap anchors spaced not more than 8 feet oc. Extend anchors at least 4 inches into masonry, turn up 4 inches and extend over and fasten to 3 joists.
 - 4. Install solid blocking between joists under jamb studs at openings.
 - 5. Under non-load-bearing partitions, install double joists separated by solid blocking equal to depth of studs above.
 - a. Install triple-joists separated as above, under partitions receiving ceramic tile and similar heavy finishes or fixtures, unless otherwise shown.
- G. Install bridging between joists where nominal depth-to-thickness ratio exceeds 4, at intervals of 8 feet.

3.04 WOOD NAILERS, BLOCKING, AND GROUNDS

- A. Install required items where indicated and where required for support, attachment or screeding of other Work. Form to shapes indicated or required. Coordinate locations and cut and shim as required to provide items at true and level planes to receive Work to be attached. Install closure strips for nailers at all edges.
 - 1. Attach to substrates as indicated; if not indicated, size and space fasteners as required to support applied loading. Maximum spacing of

fasteners shall not exceed 16 inches. Unless otherwise shown on the Drawings, install and secure material to non-wood construction as follows:

- a. To Concrete: Attach material less than 1-1/2 inches thick with screws and non-ferrous metal expansion shields. Attach material 1-1/2 inches and thicker with machine bolts and non-ferrous metal compound type anchors.
 - b. To Concrete Unit Masonry: Attach material to new masonry with annular ring nails driven into wall plugs where fastening occurs at joints of masonry or with special hardened steel masonry nails where fastening occurs in the masonry units. Attach material to existing masonry with machine screws and non-ferrous metal expansion shields where fastening occurs in solid portions of masonry. If fastening occurs at cells of masonry, secure material in place with toggle bolts.
 - c. To Brick Masonry: Attach material to new masonry with annular ring nails driven into wall plugs. Attach material to existing masonry with machine screws and non-ferrous metal expansion shields.
 - d. To Steel: Attach material with galvanized bolts and nuts or stainless steel machine screws tapped into the metal, as required by conditions.
 - e. To Non-Ferrous Metal: Attach material with stainless steel or other approved non-ferrous metal bolts and nuts or self-tapping screws, as required by conditions.
2. Counter-sink bolts and nuts flush with surfaces, unless otherwise shown. Build into masonry during installation of masonry Work. Where possible, anchor to formwork before concrete placement. Bevel both edges of members to be anchored in concrete. Shims shall be cedar shingles or redwood wedges.
 3. Install permanent grounds of dressed, preservative treated, key- beveled lumber not less than 1-1/2 inches wide and of the thickness required to bring face of ground to exact thickness of finish material involved. Remove temporary grounds when no longer required.

3.05 PLYWOOD SHEATHING AND UNDERLAYMENT

- A. Comply with printed installation requirements of the APA Design/ Construction Guide, Residential & Commercial for plywood application required, unless otherwise indicated.
- B. Plywood Underlayment: Install underlayment just prior to installation of finish flooring. Stagger end joints between panels in relation to each other and stagger all joints in relation to substrate jointing. Allow 1/32 inch space between panel ends and edges for expansion. Fasten in accordance with APA recommendations. Prior to installation of finish flooring, patch damaged areas wider than 1/16 inch. Set nails 1/16 inch, but do not fill. Sand rough areas smooth and uneven joints flush.

END OF SECTION

WOOD NAILERS AND BLOCKING

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Built-Up Bituminous Roofing System: Section 075100.
- B. SBS Modified Bitumen Roofing System: Section 075216.
- C. EPDM Sheet Roofing System: Section 075323.
- D. Adhered PVC Roofing System: Section 075419.

1.02 QUALITY ASSURANCE

- A. Mill and Producer's Stamp: Each piece of lumber shall bear a stamp indicating type, grade, mill, and grading agency.
 - 1. Pressure treated wood shall bear a stamp or tag indicating the name of the treating company, year treated, preservative used, the level of treatment, intended use (appropriate AWPA Standard), and logo of inspecting company.

1.03 STORAGE

- A. Store lumber a minimum of 6 inches off the ground, in a dry, well-ventilated place, protected from the weather.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Lumber: "Standard" Grade Douglas Fir, Hem-Fir, White Pine, Southern Pine, or Spruce-Pine-Fir pressure preservative treated in accordance with the American Wood Preservers Association (AWPA) Standard U1, Commodity Specification A for the requirements listed under Use Category UC2 and kiln dried to 19 percent moisture content after treatment.
 - 1. Use Category UCFA and UCFB: Wood nailers and blocking intended for fire protection and is used in either interior weather protected (UCFA) or exterior construction, exposed to weather (UCFB).
- B. Nails, Screws, and Bolts: ASTM A653 Class G185 hot dipped galvanized, zinc or cadmium plated, or silicon bronze.
 - 1. Screws and Bolts for fastening to Aluminum: Stainless steel, Type 304 or 316.

- C. Expansion Anchors: G185 Hot dipped galvanized steel wedge anchors, FS FF-S-325, Group II, Type 4, Class 1.
- D. Toggle Bolts: Cadmium or zinc plated tumble - wing type; FS FF-B-588.
- E. Self Threading Masonry Screws: Zinc Plated; "Tapcon" by Elco Industries, Inc., 1111 Samuelson Rd., PO Box 7009, Rockford, IL 61125-7009, (815) 397-5151.
- F. Separation Membrane For Aluminum Metals: Self adhering, self sealing, rubberized asphalt sheet membrane.
 - 1. Physical Properties:
 - a. Thickness: 40 mils minimum ASTM D 3767 Method A.
 - b. Tensile strength: 250 psi ASTM D 412.
 - c. Elongation (ultimate failure of the rubberized asphalt) 250% ASTM D 412 Die C Modified).
 - d. Permeance: 0.05 Perms max.) ASTM E 96.
 - 2. "Ice And Water Shield" by W.R. Grace Co., 62 Whittemore Ave., Cambridge, MA 02140, (800) 354-5414; "Deck Guard" by Polyguard Products Inc., P.O. Box 755, Ennis, TX 75120, (800) 541-4994; "MetalSeal" by NEI Advanced Composite Technology, 50 Pine Road, Brentwood, NH, (800) 998-4634.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install nailers and blocking true to line and plane within a tolerance of 1/8 inch in 10 feet.
- B. Fit joints neatly with no more than 1/16 inch space between abutting members.
- C. Do not install nailers or blocking across bonding expansion joints.
- D. Attach nailers and blocking securely as required to properly support the items that will be attached to them.
- E. Space fasteners equally at not more than 16 inches on center and 4 inches from each end of each member, unless noted otherwise. Secure the nailers and blocking with the following types of fasteners:
 - 1. To Cast-In-Place Concrete, Solid Concrete Masonry Units, and Brick: Use expansion anchors or self-threading masonry screws.
 - 2. To Faces of Hollow Concrete Masonry Units: Use toggle bolts.
 - 3. To Tops of Hollow Concrete Masonry Units: Use anchor bolts extending to course below, embedded in 3000 psi concrete filled cores.
 - 4. To Wood: Use nails or screws.
 - 5. To Metal: Use bolts or self-tapping screws.
- F. Countersink fasteners if they interfere with the proper installation of items to be attached to the nailers and blocking.

3.02 APPLICATION OF SEPARATION MEMBRANE

- A. Installing Separation Membrane:
 - 1. Install 1 ply of underlayment over the entire horizontal and vertical surface of pressure treated wood nailers and blocking lapping each ply 2 inches over the preceding ply so that no aluminum material comes in contact with pressure treated wood.

END OF SECTION

PART I GENERAL

1.01 SECTION INCLUDES

- A Asphalt roofing shingles.
- B Leak barrier and roof deck protection.
- C Metal flashing associated with shingle roofing.

1.02 RELATED SECTIONS

- A Section 06100 - Rough Carpentry: Framing, wood decking, and roof sheathing.
- B Section 07620 - Flashing and Sheet Metal: Sheet metal flashing not associated with shingle roofing; gutters and downspouts.

1.03 REFERENCES American Society for Testing and Materials (ASTM) - Annual Book of ASTM Standards

- 1. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 2. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 - 3. ASTM B 370 - Standard Specification for Copper Sheet and Strip for Building Construction.
 - 4. ASTM D 3018 - Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules.
 - 5. ASTM D 3161 - Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method).
 - 6. ASTM D 3462 - Standard Specification for Asphalt Shingles Made From Glass Felt and Surfaced with Mineral Granules.
 - 7. ASTM D 4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
 - 8. ASTM D 7158 - Standard Test Method for Wind-Resistance of Sealed Asphalt Shingles (Uplift Force/Uplift Resistance Method).
 - 9. AC438-1011-R1 - New Acceptance Criteria for Alternative Asphalt Roofing Shingles
 - 10. UL 790 - Tests for Fire Resistance of Roof Covering Materials.
 - 11. UL 997 - Wind Resistance of Prepared Roof Covering Materials.
 - 12. UL 2218 - Impact Resistance of Prepared Roof Covering Materials.
- B Asphalt Roofing Manufacturers Association (ARMA)
 - C Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) - Architectural Sheet Metal Manual.
 - D National Roofing Contractors Association (NRCA)
 - E American Society of Civil Engineers (ASCE).
 - 1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.

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- F U.S. Green Building Council (USGBC)
- G Leadership in Energy and Environmental Design (LEED)
- H ENERGY STAR
- I Cool Roof Rating Council (CRRC)
- J Miami Dade County

1.04 DEFINITIONS

- A Roofing Terminology: Refer to ASTM D1079 and the glossary of the National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual for definitions of roofing terms related to this section.

1.05 LEED CERTIFICATION

- A Provide a roofing system that will achieve or aid in the qualification of points satisfying
 1. Sustainable Site credit 7.2 - Heat Island Effect - Roof.
 2. Materials & Resource credit 5 - Local and Regional Materials.

1.06 SUBMITTALS

- A Submit copies of GAF® product data sheets, detail drawings and samples for each type of roofing product.
- B L.E.E.D. submittal: Coordinate with Section 01115 - Green Building Requirements, for LEED certification submittal forms and certification templates.

1.07 QUALITY ASSURANCE

- A Manufacturer Qualifications: Provide all primary roofing products, including shingles, underlayment, leak barrier, and ventilation, by a single manufacturer.
- B Installer Qualifications: Installer must be approved for installation of all roofing products to be installed under this section.

1.08 REGULATORY REQUIREMENTS

- A Provide a roofing system achieving an Underwriters Laboratories (UL) Class A fire classification.
- B . Install all roofing products in accordance with all federal, state and local building codes.
- D All work shall be performed in a manner consistent with current OSHA guidelines.

1.09 PREINSTALLATION MEETING

- A General: For all projects in excess of 250 squares of roofing, a pre-installation meeting is strongly recommended.
- B Timing: The meeting shall take place at the start of the roofing installation, no more than 2 weeks into the roofing project.
- C Attendees: Meeting to be called for by manufacturer's certified contractor. Meeting's mandatory attendees shall include the certified contractor and the manufacturer's representative. Non-mandatory attendees shall include the owner's representative, architect or engineer's representative, and the general contractor's representative.
- D Topics: Certified contractor and manufacturer's representative shall review all pertinent requirements for the project, including but not limited to, scheduling, weather considerations, project duration, and requirements for the specified warranty.

1.10 DELIVERY, STORAGE, AND HANDLING

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- A Store all products in manufacturer's unopened, labeled packaging until they are ready for installation.
- B Store products in a covered, ventilated area, at temperature not more than 110 degrees F (43 degrees C); do not store near steam pipes, radiators, or in direct sunlight.
- C Store bundles on a flat, properly drained surface. Maximum stacking height shall not exceed GAF®'s recommendations. Store all rolls on end.
- D Store and dispose of solvent-based materials in accordance with all federal, state and local regulations.

1.11 WEATHER CONDITIONS

- A Proceed with work only when existing and forecasted weather conditions will permit work to be performed in accordance with GAF®'s recommendations

1.12 WARRANTY Provide to the owner a GAF® Shingle & Accessory Ltd. Warranty for:

- 1. GAF® Lifetime Shingles covering
 - a Single family detached homes owned by individuals the first
 - b Manufacturing defects: 100% coverage for materials for:
 - 10 years non-prorated, then 20% thereafter for all GAF Lifetime Shingles.
 - 5 years non-prorated, then 20% thereafter for GAF Royal Sovereign and Marquis Weathermax Shingles.
 - c Any other type of owner or building – 40 years with the first 5 years non - prorated.
 - d With the use of three or more GAF Accessory Products (GAF Ridge Cap Shingles, GAF Starter Strip Shingle, GAF Leak Barrier, GAF Roof Deck Protection, GAF Cobra
- 2. Against algae discoloration for 10 years
- B Provide to the owner a **GAF® WeatherStopper® Golden Pledge® Ltd Warranty** covering:
 - 1. Roofs installed by a Certified GAF® Master Elite™ Contractor only.
 - 2. Manufacturing defects: 100% coverage for materials and labor for:
 - a Single family detached homes owned by individuals the first
 - 50 years non-prorated, then 20% thereafter for all GAF lifetime shingles.
 - 20 years non-prorated, then 20% thereafter for GAF Marquis Weathermax and GAF Royal Sovereign Shingles.
 - b Any other type of owner or building – 40 years with the first 20 years non-prorated. (excludes Marquis WeatherMax and Royal Sovereign)
 - 3. Workmanship errors: 100% coverage for workmanship errors for:
 - a Single family detached homes owned by individuals - the first 25 years for after installation. (20 years for Marquis WeatherMax and Royal Sovereign)
 - b Any other type of owner or building - 20 years.
 - 4. Roof system NOT installed over an existing roof, all existing roof materials must be removed to the deck.
 - 5. Warranted against algae discoloration for 10 years

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6. Full roof installations (Roofs installed on portions of buildings do not qualify) using the following GAF® products.
 - a You must use GAF® Roof Deck Protection.
 - b You must use eligible GAF® Leak Barrier in valleys and around dormers, sidewalls, firewalls, chimneys, plumbing vents, and skylights. In the North, leak barriers must be used at all eaves at least 24 inch inside warm wall.
 - c You must use GAF® pre-cut starter strip products (only those with factory applied adhesive) at the eaves. Note: To obtain bonus wind coverage, you must use GAF® pre cut starter strip products (with factory applied adhesive) at the eaves and rakes and you must install each shingle using 6 nails. For Miami Dade County Florida, no adhesive on rakes. You must cement the starter strip in and nail along the rake.
 - d You must use eligible COBRA® ventilation with adequate intake ventilation. Master Flow® exhaust ventilation products can be substituted only if COBRA® ridge ventilation cannot be installed due to a structure's architecture. In any event, adequate ventilation should meet the following requirements:
 - i. Minimum net free ventilation area of 1 sq ft per 150 sq ft of ceiling area is required. When intake vents are located at the eaves and exhaust vents are located near the roof's peak (in a properly balanced system) for maximum air flow, ventilation may be reduced to 1 sq ft per 300 sq ft. If these standards are not met, GAF® cannot be responsible for damage caused by inadequate ventilation.
 - e You must use GAF® Ridge Cap Shingles or shingles that correspond to the shingle product you are installing.
 - f You must use eligible GAF® Roofing Shingles.
 - g New metal flashings must be installed. Metal drip edge must be used at eaves and is recommended at rake edges.
7. In addition to the requirements listed above, you installer must register and pay for this warranty. On projects that total more than 250 squares, the permanent Golden Pledge® Ltd Warranty will be issued only if the project passes GAF®'s final inspection. GAF® reserves the right to withhold the warranty if the roof has not been installed according to GAF®'s written application instructions. GAF® also strongly recommends that your Master Elite® Contractor schedule a start-up and at least one interim inspection on projects of 250 squares or more by contacting GAF® at least three weeks prior to the start of roof work.

PART I PRODUCTS

1.01 MANUFACTURER

- A Acceptable Manufacturer: GAF®, 1 Campus Drive, Parsippany, NJ 07054. Tel: 1-973-628-3000.
- B Requests for substitutions will be considered in accordance with provisions of Section 01600.
 1. 5/8" plywood

1.02 SHINGLES

- A Self sealing, granule surfaced, asphalt shingle with a strong fiberglass reinforced Micro Weave core and StainGuard protection, which prevents pronounced discoloration from blue-green algae through formulation/unique blends of granules. Architectural laminate

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styling provides a wood shake appearance with a 5 5/8in. exposure. Features GAF's patented High Definition color blends and enhanced shadow effect. UL 790 Class A rated with UL 997 Wind Resistance Label; ASTM D 7158, Class H; ASTM D 3161, Type 1; ASTM D 3018, Type 1; ASTM D 3462; AC438 compliant; CSA 123.5-98; Dade County Approved, Florida Building Code Approved, Texas Dept of Insurance Approved, ICC Report Approval. **Timberline HD®** Lifetime High Definition Shingles, by GAF®.

1. Color: As selected from manufacturers' full range.
2. Color: _____

1.03 HIP AND RIDGE SHINGLES

- A High profile self sealing hip and ridge cap shingle matching the color of selected roof shingle. Each bundle covers approx. 20 lineal feet (6.10m). **Timbertex®** Premium Ridge Cap Shingles, by GAF®.

1.04 STARTER STRIP

- A Pre-cut, color coordinated starter strip shingle designed as a second starter course for shingles with large cut-outs. Each bundle covers approx.. 60 lineal feet (18.29 m) **StarterMatch™** Starter Strip by GAF®.

1.05 LEAK BARRIER

- A Self-adhering, self-sealing, bituminous leak barrier surfaced with fine, skid-resistant granules. Approved by UL, Dade County, ICC, State of Florida and Texas Department of Insurance. Each roll contains approx. 150 sq ft (13.9 sq.m.), 36" X 50' (0.9m x 20.3m) or 200 sq ft (18.6 sq.m.), 36" X 66.7' (0.9m x 20.3m). **WeatherWatch®** Leak Barrier, by GAF®.

1.06 SHINGLE UNDERLAYMENT

- A Premium, water repellant, breather type non-asphaltic underlayment. UV stabilized polypropylene construction. Meets or exceeds ASTM D226 and D4869. Approved by Dade County, Florida Building Code, and ICC. Each roll contains approximately 10 squares (1003 sq. ft.) of material and is 54 in. x 223 ft. **Deck-Armor™** Premium Breathable Roof Deck Protection, by GAF®.

1.07 ROOFING CEMENT

- A Asphalt Plastic Roofing Cement meeting the requirements of ASTM D 4586, Type I or II.

1.08 ROOF ACCESSORIES

- A Exterior acrylic rust resistant aerosol roof accessory paint. Each 6 oz can is available in boxes of 6 and in a wide variety of colors to compliment the roof. **Shingle-Match™** Roof Accessory Paint by GAF®.

1.09 ATTIC VENTILATION

- A Fascia and Soffit/Under Eave Vents

1. Surface mounted, screened aluminum, corrosion resistant soffit vent. **MasterFlow™** EAC Soffit Vent by GAF®.

1.10 NAILS

- A Standard round wire, zinc-coated steel or aluminum; 10 to 12 gauge, smooth, barbed or deformed shank, with heads 3/8 inch (9mm) to 7/16 inch (11mm) in diameter. Length must be sufficient to penetrate into solid wood at least 3/4 inch (19mm) or through plywood or oriented strand board by at least 1/8 inch (3.18mm).

- 1.11 METAL FLASHING 24 gauge hot-dip galvanized steel sheet, complying with ASTM A 653/A 653M, G90/Z275.

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- B 0.032-inch (0.8mm) aluminum sheet, complying with ASTM B 209.

PART III EXECUTION

3.01 EXAMINATION

- A Do not begin installation until the roof deck has been properly prepared.
- B If roof deck preparation is the responsibility of another installer, notify the architect or building owner of unsatisfactory preparation before proceeding.

3.02 PREPARATION Remove all existing roofing down to the roof deck.

- B Verify that the deck is dry, sound, clean and smooth. It shall be free of any depressions, waves, and projections.
- C Cover with sheet metal, all holes over 1 inch (25mm) in diameter, cracks over 1/2 inch (12mm) in width, loose knots and excessively resinous areas.
- D Replace damaged deck with new materials.
- E Clean deck surfaces thoroughly prior to installation of eaves protection membrane and underlayment.

3.03 PREPARATION OF SUBSTRATE Clean deck surfaces thoroughly prior to installation of eaves protection membrane and underlayment.

- B At areas that receive eaves protection membrane, fill knotholes and cracks with latex filler.
- C Install crickets on the upslope side of all chimneys in the north, any chimney wider than 24" (610mm), and on all roofs steeper than 6/12.

3.04 PREPARATION Verify that the deck is structurally sound and free of deteriorated decking. All deteriorated decking shall be removed and replaced with new materials.

- B Verify that the existing shingles are dry, sound, clean and smooth. All curled, buckled or loose tabs shall be nailed down or removed.
- C Clean shingle surfaces thoroughly prior to installation of eaves protection membrane and underlayment.

3.05 SUBSTRATE INSTALLATION

- A The structural roof deck shown in the plans shall be smooth and level and free of water or debris before the nail base insulation is installed. Apply vapor retarder if required.

NOTE: GAF recommends that the designer carefully considers the need for a vapor/air retarder.

- B Installation shall follow the GAF written installation instructions.
- C Fasten with ThermaCal® Fasteners to the supporting roof deck shown in the plans.
- D Protect nail base insulation work from exposure to moisture damage and deterioration, primarily by prompt installation of the roofing, sheet metal and waterproofing work.

3.06 INSTALLATION OF UNDERLAYMENTS General:

1. Install using methods recommended by GAF®, in accordance with local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.

- B Eaves:

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1. Install eaves edge metal flashing tight with fascia boards; lap joints 2 inches (51mm) and seal with plastic cement or high quality urethane sealant; nail at the top of the flange.
2. In the north, and on all roofs between 2/12 and 4/12 (low slopes) install GAF® leak barrier up the slope from eaves edge a full 36 inches (914mm) or to at least 24 inches (610 mm) beyond the interior "warm wall". Lap ends 6 inches (152mm) and bond.

C Hips and Ridges:

1. Install GAF® leak barrier along entire lengths. If ridge vents are to be installed, position the GAF® leak barrier so that the ridge slots will not be covered.

D Roof Deck Protection:

1. Install one layer of GAF® roof deck protection over the entire area not protected by GAF® leak barrier at the eaves or valley. Install sheets horizontally so water sheds and nail in place.
2. On roofs sloped at more than 4:12, lap horizontal edges at least 2 inches (51mm) and at least 2 inches (51mm) over eaves protection membrane.
3. On roofs sloped between 2:12 and 4:12, lap horizontal edges at least 19 inches (482 mm) and at least 19 inches (482mm) over eaves protection membrane.
4. Lap ends at least 4 inches (102 mm). Stagger end laps of each layer at least 36 inches (914 mm).
5. Lap GAF® roof deck protection over GAF® leak barrier in valley at least 6 inches (152mm).

E Deck-Armor™ Application

1. Deck-Armor shall be installed over a clean, dry deck.
2. Install Weather Watch® or StormGuard® Leak Barrier at eaves, valleys, rakes, skylights, dormers and other vulnerable leak areas.
3. Lay Deck-Armor™ over deck and overlap 3" (76mm) at side laps and 6" (152mm) at end laps.
4. For exposure to rain or snow, overlap 12" (305mm) at end laps.
5. For side and end laps: fasten Deck-Armor 12" (305mm) o.c. (6" (152mm)o.c. for high wind areas).
6. For middle of the roll: fasten Deck-Armor 24" (610mm) o.c. (12" (305mm) o.c. for high wind areas).
7. For exposure to rain or snow, completely cover all side laps, end laps and fasteners with tape.
8. For long term exposure see complete Deck-Armor installation instructions for side lap detail.
9. If roof may be exposed to high winds, apply tape over all fasteners at the center of the roll to prevent rain or snow from entering at the fasteners.
10. For slopes less than 2:12, a double application of Deck-Armor™ is required. See complete Deck-Armor installation instructions for more information.

F Penetrations:

1. Vent pipes: Install a 24 inch (610 mm) square piece of eaves protection membrane lapping over roof deck underlayment; seal tightly to pipe.

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2. Vertical walls: Install eaves protection membrane extending at least 6 inches (152mm) up the wall and 12 inches (305mm) on to the roof surface. Lap the membrane over the roof deck underlayment.
3. Rake Edges: Install metal edge flashing over eaves protection membrane and roof deck underlayment; set tight to rake boards; lap joints at least 2 inches (51mm) and seal with plastic cement; secure with nails.

3.07 INSTALLATION OF STARTER SHINGLES

A General:

1. Install in accordance with GAF®'s instructions and local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.
2. Refer to application instructions for the selected starter strip shingles.

B Placement and Nailing:

1. For maximum wind resistance along rakes & eaves, install any GAF® starter strip containing sealant or cement shingles to underlayment and each other in a 4" (102mm) width of asphalt plastic roof cement.
2. Place starter strip shingles 1/4" – 3/4" (6 – 19mm) over eave and rake edges to provide drip edge.
3. Nail approximately 1-1/2" – 3" (38 – 76mm) above the butt edge of the shingle.
4. Rake starter course should overlap eave edge starter strip at least 3" (76mm).

3.08 INSTALLATION OF SHINGLES

A General:

1. Install in accordance with GAF®'s instructions and local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.
2. Minimize breakage of shingles by avoiding dropping bundles on edge, by separating shingles carefully (not by "breaking" over ridge or bundles), and by taking extra precautions in temperatures below 40 degrees F (4 degrees C).
3. Handle carefully in hot weather to avoid scuffing the surfacing, or damaging the shingle edges.

B Placement and Nailing: Secure with 4, 5, or 6 nails per shingle per GAF®'s application instructions or local codes.

2. Placement of nails varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.
3. Nails must be driven flush with the shingle surface. Do not overdrive or under drive the nails.
4. Shingle offset varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.

C Placement and Nailing: Beginning with the starter strip, trim shingles so that they "nest" within the shingle located beneath it. This procedure will yield a first course that is typically 3 inch (76mm) to 4 inch (102mm) rather than a fully exposed shingle.

2. Laterally, offset the new shingles from the existing keyways, to avoid waves or depressions caused by excessive dips in the roofing materials.
3. Using the bottom of the tab on existing shingles, align subsequent courses.

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4. *Note: DO NOT install standard sized shingles (5inch exposure) over metric (5 5/8 inch exposure) shingles, as it will overexpose the shingles and reveal the nails. Use standard alignment methods to assure proper shingle placement.
5. Secure with 4, 5, or 6 nails per shingle per GAF®'s instructions or local codes.
6. Placement of nails varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.
7. Nails must be driven flush with the shingle surface. Do not overdrive or under drive the nails.
8. Shingle offset varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.

D Penetrations

1. All Penetrations are to be flashed according to GAF®, ARMA and NRCA application instructions and construction details.

3.09 INSTALLATION OF ATTIC VENTILATION

A General

1. Ventilation must meet or exceed current F.H.A., H.U.D. and local code requirements.

B Ridge / Soffit ventilation

1. Install ridge vent along the entire length of ridges:
2. Cut continuous vent slots through the sheathing, stopping 6 inches (152mm) from each end of the ridge.
3. On roofs without ridge board, make a slot 1 inch (25mm) wide, on either side of the peak (2 inch (51mm) overall).
4. On roofs with ridge board, make two slots 1-3/4 inches (44.5mm) wide, one on each side of the peak (3 ½ inch (89mm) overall).
5. Install ridge vent material along the full length of the ridge, including uncut areas.
6. Butt ends of ridge vent material and join using roofing cement.
7. Install eaves vents in sufficient quantity to equal or exceed the ridge vent area.

3.10 INSTALLATION OF VENTILATION ACCESSORIES

A Chimney Caps

1. Install chimney caps to manufacturer recommendations

B Foundation Vents

1. Install foundation vents per manufacturer recommendations and applications.

3.11 PROTECTION

- A Protect installed products from foot traffic until completion of the project.
- B Any roof areas that are not completed by the end of the workday are to be protected from moisture and contaminants.

END OF SECTION

SHEET METAL AND FLASHING TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes sheet metal flashing and trim in the following categories:
 - 1. Exposed trim, drip edge, gravel stops, and fascia.
 - 2. Metal flashing.
 - 3. Gutters and downspouts.
 - 4. Reglets.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 7 Section "Joint Sealants" for elastomeric sealants.
 - 2. Division 15, Section for overhead-piping safety pans.

1.3 PERFORMANCE REQUIREMENTS

- A. General: Install sheet metal flashing and trim to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failing.
- B. Fabricate and install flashings at roof edges to comply with recommendations of FM Loss Prevention Data Sheet 1-49 for the following wind zone:
 - 1. Wind Zone 2: Wind pressures of 31 to 45 psf.

1.4 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product Data including manufacturer's material and finish data, installation instructions, and general recommendations for each specified flashing material and fabricated product.
- C. Shop Drawings of each item specified showing layout, profiles, methods of joining, and anchorage details.
- D. Samples of sheet metal flashing, trim, and accessory items, in the specified finish. Where finish involves normal color and texture variations, include Sample sets composed of 2 or more units showing the full range of variations expected.
 - 1. 8-inch- square Samples of specified sheet materials to be exposed as finished surfaces.
 - 2. 8-inch- long Samples of factory-fabricated products exposed as finished Work. Provide complete with specified factory finish.
- E. Qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experience Installer who has completed sheet metal flashing and trim work similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.

1.6 PROJECT CONDITIONS

- A. Coordinate Work of this Section with interfacing and adjoining Work for proper sequencing of each installation. Ensure best possible weather resistance, durability of Work, and protection of materials and finishes.

PART 2 - PRODUCTS

2.1 METALS

- A. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated and with not less than the strength and durability of alloy and temper designated below:
 - 1. Factory-Painted Aluminum Sheet: ASTM B 209, 3003-H14, with a minimum thickness of 0.040 inch, unless otherwise indicated.
 - 2. Extruded Aluminum: ASTM B 221, alloy 6063-T52, with a minimum thickness of 0.080 inch for primary legs of extrusions that are anodized, unless otherwise indicated.

2.2 REGLETS

- A. General: Units of type, material, and profile indicated, formed to provide secure interlocking of separate reglet and counterflashing pieces and compatible with flashing indicated.
- B. Masonry Type: Provide with offset top flange for embedment in masonry mortar joint.
- C. Flexible Flashing Retainer: Provide resilient plastic or rubber accessory to secure flexible flashing in reglet where clearance does not permit use of standard metal counterflashing or where Drawings show reglet without metal counterflashing.
- D. Counterflashing Wind-Restraint Clips: Provide clips to be installed before counterflashing to prevent wind uplift of the counterflashing lower edge.
 - 1. Material: Aluminum, 0.024 inch thick.

2.3 MISCELLANEOUS MATERIALS AND ACCESSORIES

- A. Fasteners: Same metal as sheet metal flashing or other noncorrosive metal as recommended by sheet metal manufacturer. Match finish of exposed heads with material being fastened.
- B. Asphalt Mastic: SSPC-Paint 12, solvent-type asphalt mastic, nominally free of sulfur and containing no asbestos fibers, compounded for 15-mil dry film thickness per coat.
- C. Mastic Sealant: Polyisobutylene; nonhardening, nonskinning, nondrying, nonmigrating sealant.

- D. Elastomeric Sealant: Generic type recommended by sheet metal manufacturer and fabricator of components being sealed and complying with requirements for joint sealants as specified in Division 7 Section "Joint Sealants."
- E. Epoxy Seam Sealer: 2-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior and interior nonmoving joints, including riveted joints.
- F. Adhesives: Type recommended by flashing sheet metal manufacturer for waterproof and weather-resistant seaming and adhesive application of flashing sheet metal.
- G. Paper Slip Sheet: 5-lb/square red rosin, sized building paper conforming to FS UU-B-790, Type I, Style 1b.
- H. Metal Accessories: Provide sheet metal clips, straps, anchoring devices, and similar accessory units as required for installation of Work, matching or compatible with material being installed; noncorrosive; size and thickness required for performance.
- I. Roofing Cement: ASTM D 4586, Type I, asbestos free, asphalt based.

2.4 FABRICATION, GENERAL

- A. Sheet Metal Fabrication Standard: Fabricate sheet metal flashing and trim to comply with recommendations of SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of the item indicated.
- B. Comply with details shown to fabricate sheet metal flashing and trim that fit substrates and result in waterproof and weather-resistant performance once installed. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
- C. Form exposed sheet metal Work that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems.
- D. Seams: Fabricate nonmoving seams in aluminum with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
- E. Expansion Provisions: Space movement joints at maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions in Work cannot be used or would not be sufficiently weatherproof and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).
- F. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.
- G. Separate metal from noncompatible metal or corrosive substrates by coating concealed surfaces at locations of contact with asphalt mastic or other permanent separation as recommended by manufacturer.
- H. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of sheet metal exposed to public view.

- I. Fabricate cleats and attachment devices from same material as sheet metal component being anchored or from compatible, noncorrosive metal recommended by sheet metal manufacturer.
 1. Size: As recommended by SMACNA manual or sheet metal manufacturer for application but never less than thickness of metal being secured.

2.5 SHEET METAL FABRICATIONS

- A. General: Fabricate sheet metal items in thickness or weight needed to comply with performance requirements but not less than that listed below for each application and metal.
- B. Gutters: Fabricate from the following material:
 1. Aluminum: 0.040 inch thick.
- C. Downspouts: Fabricate from the following material:
 1. Aluminum: 0.040 inch thick.
- D. Splash Pans: Fabricate from the following material:
 1. Precast concrete.
- E. Exposed Trim, Gravel Stops, and Fasciae: Fabricate from the following material:
 1. Aluminum: 0.050 inch thick.
- F. Base Flashing: Fabricate from the following material:
 1. Aluminum: 0.040 inch thick.
- G. Counterflashing: Fabricate from the following material:
 1. Aluminum: 0.0320 inch thick.
- H. Flashing Receivers: Fabricate from the following material:
 1. Aluminum: 0.0320 inch thick.
- I. Drip Edges: Fabricate from the following material:
 1. Aluminum: 0.0320 inch thick.
- J. Eave Flashing: Fabricate from the following material:
 1. Aluminum: 0.0320 inch thick.
- K. Roof-Penetration Flashing: Fabricate from the following material, unless otherwise noted:
 1. EPDM compression molded rubber. Provide with flexible aluminum base and stainless steel clamp ring.
- L. Overhead-Piping Safety Pans: See Division 15, Mechanical.

2.6 ALUMINUM EXTRUSION FABRICATIONS

- A. Aluminum Extrusion Units: Fabricate extruded-aluminum running units with formed or extruded-aluminum joint covers for installation behind main members where possible. Fabricate mitered and welded corner units.

2.7 ALUMINUM FINISHES

- A. General: Comply with Aluminum Association's (AA) "Designation System for Aluminum Finishes" for finish designations and application recommendations.
- B. High-Performance Organic Coating Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturer's instructions.
 - 1. Fluoropolymer 2-Coat Coating System: Manufacturer's standard 2-coat, thermocured system composed of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 605.2.
 - a. Color and Gloss: Match Architect's sample.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions under which sheet metal flashing and trim are to be installed and verify that Work may properly commence. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Unless otherwise indicated, install sheet metal flashing and trim to comply with performance requirements, manufacturer's installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Anchor units of Work securely in place by methods indicated, providing for thermal expansion of metal units; conceal fasteners where possible, and set units true to line and level as indicated. Install Work with laps, joints, and seams that will be permanently watertight and weatherproof.
- B. Install exposed sheet metal Work that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
- C. Roof-Edge Flashings: Secure metal flashings at roof edges according to FM Loss Prevention Data Sheet 1-49 for specified wind zone.
- D. Expansion Provisions: Provide for thermal expansion of exposed sheet metal Work. Space movement joints at maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions in Work cannot be used or would not be sufficiently weatherproof and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

- E. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards. Fill joint with sealant and form metal to completely conceal sealant.
- F. Seams: Fabricate nonmoving seams in aluminum with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
- G. Separations: Separate metal from noncompatible metal or corrosive substrates by coating concealed surfaces, at locations of contact, with asphalt mastic or other permanent separation as recommended by manufacturer.
 - 1. Underlayment: Where installing aluminum directly on cementitious or wood substrates, install a slip sheet of red-rosin paper and a course of polyethylene underlayment.
 - 2. Bed flanges of Work in a thick coat of roofing cement where required for waterproof performance.
- H. Install reglets to receive counterflashing according to the following requirements:
 - 1. Where reglets are shown in masonry, furnish reglets for installation under Division 4 Section "Unit Masonry."
- I. Counterflashings: Coordinate installation of counterflashings with installation of assemblies to be protected by counterflashing. Install counterflashings in reglets or receivers. Secure in a waterproof manner by means of snap-in installation and sealant, lead wedges and sealant, interlocking folded seam, or blind rivets and sealant. Lap counterflashing joints a minimum of 2 inches and bed with sealant.
- J. Roof-Drainage System: Install drainage items fabricated from sheet metal, with straps, adhesives, and anchors recommended by SMACNA's Manual or the item manufacturer, to drain roof in the most efficient manner. Coordinate roof-drain flashing installation with roof-drainage system installation. Coordinate flashing and sheet metal items for steep-sloped roofs with roofing installation.
- K. Overhead-Piping Safety Pans: Suspend pans from pipe and install drain line to plumbing waste or drain line.
- L. Roof-Penetration Flashing: Coordinate roof-penetration flashing installation with roofing and installation of items penetrating roof. Install flashing as follows:
 - 1. Seal and clamp flashing to pipes penetrating roof.
- M. Splash Pans: Install at base of downspouts.

3.3 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces, removing substances that might cause corrosion of metal or deterioration of finishes.
- B. Provide final protection and maintain conditions that ensure sheet metal flashing and trim Work during construction is without damage or deterioration other than natural weathering at the time of Substantial Completion.

END OF SECTION

JOINT SEALERS

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

A. Provide all joint sealer Work as indicated on the Drawings, as required for the completed Work, and as specified herein. The Work shall include, but shall not be limited to, the following:

1. Vertical joints between metal door trim, display boards, display cases, panel boards and wainscots and other facing materials.
2. Vertical control joints and expansion joints.
3. Exterior frames at metal windows, metal door frames, metal subframes, and at other junctures of different materials.
4. Joints in walks, pavements and curbs.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-in-Place Concrete
- B. Section 04810 - Unit Masonry Assemblies
- C. Section 08110 - Steel Doors and Frames
- D. Section 08550 - Wood Windows
- E. Section 09260 - Gypsum Board Assemblies
- F. Section 09511 - Suspended Acoustical Ceilings

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM)

1.4 SUBMITTALS

A. Product Data

1. Catalog sheets, specifications, and installation instructions for each product specified except miscellaneous materials.

B. Samples

1. Sealants: One pint or standard tube.
2. Joint Fillers: 24" long full section.
3. Gaskets: 24" long full section.
4. Joint Primer/Sealer/Conditioners: One pint.
5. Backer Rods: 24" long full section.
6. Bond Breaker Tape: 24" long full section.

C. Quality Control Submittals

1. Installer's Qualifications Data: Affidavit required under Quality Assurance Article.
2. Company Field Advisor Data: Name, business address, and telephone number of Company Field Advisor.

1.5 QUALITY ASSURANCE

A. Installer's Qualifications: The persons installing the sealants and their supervisor shall be personally experienced in the installation of sealants and shall have been regularly employed by a company engaged in the installation of sealants for a minimum of two years.

1. Furnish to the Authority the names and addresses of five similar projects which the foregoing people have worked on during the past two years.
2. Furnish a letter from the sealant manufacturer, stating that the foregoing people are authorized to install the manufacturer's sealant materials and that the manufacturer's specifications are applicable to the requirements of this Project.

B. Container Labels: Include manufacturer's name, trade name of product, kind of material, federal specification number (if applicable), expiration date (if applicable), and packaging date or batch number.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle joint sealer materials as recommended by the Manufacturer, to protect from damage.

1.7 PROJECT CONDITIONS

A. Environmental Requirements

1. Temperature: Unless otherwise approved or recommended in writing by the sealant manufacturer, do not install sealants at temperatures below 40 degrees F or above 85 degrees F.
2. Humidity and Moisture: Do not install the Work of this Section under conditions that are detrimental to the application, curing, and performance of the materials.
3. Ventilation: Provide sufficient ventilation wherever sealants, primers, and other similar materials are installed in enclosed spaces. Follow manufacturer's recommendations.

B. Protection

1. Protect all surfaces adjacent to sealants with non-staining removable tape or other approved covering to prevent soiling or staining.
2. Protect all other surfaces in the Work area with tarps, plastic sheets, or other approved covering to prevent defacement from droppings.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. General Electric Co., Waterford, NY 12188

- B. Dow Corning Corp., Midland, Michigan 48686
- C. Pecora Corp., Harleyville, PA
- D. ChemRex Inc. - Sonneborn, Shakopee, MN 55379
- E. Tremco Sealing and Coatings, Wading River, NY 11792
- F. Bostik, Midland, MA 01949
- G. Protective Treatments, Inc.(PTI), Dayton, OH 45413
- H. Products Research & Chemical Corp., Gloucester City, NJ 08030
- I. Sika, Lindhurst, NJ 07071
- J. Mameco International, Inc./RPM, Cleveland, Ohio 44128

2.2 **SEALANTS**

A. **Type 1 Sealant:** (for use in vertical expansion joints where extensive movement occurs; for general purpose use around windows, door frames, louvers, and other junctures).

1. One-part low-medium modulus silicone sealant (plus or minus 50% movement); ASTM C920 classifications type S, grade NS, class 25, uses NT, M, G, and A.
 - a. General Electric Silpruf, Dow Corning's 791, Pecora's 864, Sonneborn's Omniseal, or Tremco Spectrem 2.
2. Silicones shall meet the following requirements:
 - a. ASTM C719 - Low-Medium Modulus (+ or - 50%). Sealants shall not exhibit any cracking or surface degradation after 5000 hours exposure in the Atlas Twin Arc Weatherometer.
 - b. ASTM C661 - Shall not incur a durometer increase greater than 10 points.
 - c. Sealants shall contain zero parts of toxic isocyanurate ingredients.
3. Thoroughly clean surfaces on which sealant is to be applied and prime surfaces as recommended by Manufacturer before applying sealant.

B. **Type 1A Sealant:** (for use for pavements, walks, and curbs)

1. For Horizontal Joints: Two-part, self-leveling polyurethane sealant for traffic bearing construction; ASTM C920 classifications type M, grade P, class 25, uses T, M, A, and O (granite).
 - a. Mameco's Vulkem 255, Pecora's Urexpam NR-200, or Bostik's Chem-Calk 550, Products Research & Chemical's RC-2SL, or Tremco THC 900/901.
2. For Vertical Joints: Two-part, non-sag polyurethane sealant; ASTM C920 classifications type M, grade NS, class 25, uses NT, M, A and O (granite).
 - a. Mameco's Vulkem 227, Pecora's Dynatrol II, or Bostik's Chem-Calk 500,

Products Research & Chemical's RC-2, or Tremco Dymeric 511.

C. Type 1B Sealant: (for Plaza Decks)

1. For Horizontal Joints: One-part, self-leveling polyurethane sealant for traffic bearing construction.
 - a. Mameco's Vulkem 45, Pecora's Urexpan NR-201, or Sika's Sikaflex-12SL, Products Research & Chemical's PR-6006, or Tremco Tremflex.
2. For Vertical Joints: One-part, non-sag polyurethane sealant; ASTM C920 classifications type S, grade NS, class 25, uses NT, M, A and O (granite).
 - a. Mameco's Vulkem 116, Pecora's Dynatrol I, or Sika's Sikaflex 1a, Products Research & Chemical's RC-1, or Tremco Dymonic.

D. Type 1C Sealant: (use at interior wet areas only-- Restroom areas)

1. One-part, mildew resistant silicone sealant; ASTM C920 classifications type S, grade NS, class 25, uses NT, M, G and A.
 - a. Dow Corning's 786, General Electric's Sanitary 1700, Bostik's Silicone Rubber Bathroom Caulk, or Tremco Proglaze.

E. Type 2 Sealant: (for joints & cracks 1/4" or less in width)

1. One-part acrylic polymer sealant
 - a. Pecora's 60+ Unicrylic, PTI's 738, or Tremco's Mono.

F. Type 2A Sealant: (joints & cracks 1/4" or less in width).

1. One-part clear acrylic sealant for sealing small joints
 - a. PTI's 200 or Tremco's 830.

G. Type 3 Sealant: (for concealed bedding only).

1. One-part butyl rubber sealant
 - a. Pecora's BC-158, PTI's 707, Bostik's Chem-Calk 300, or Tremco Butyl.

H. Type 4 Sealant: (use at high temperature applications, e.g., flues)

1. One-part silicone sealant for high temperature; ASTM C920 classifications type S, grade NS, class 25, uses NT, M, G, and A.
 - a. Dow Corning's Silastic 726 RTV, General Electric's RTV 106, or Tremco Spectrem 1.

I. Type 5 Sealant: (use at relieving angles - between brick and asphalt-impregnated fabric/copper flashing).

1. One-part polyurethane sealant; ASTM C920 classifications type S, grade NS, class 25, uses NT, M, and A.
 - a. Only Bostik's Chem Calk 900 or Tremco's Dymonic will be acceptable.
- J. Pre-formed Sealant
 1. Bitumen impregnated flexible polyurethane foam precompressed to 20% of its uncompressed length such as Progress Unlimited's Compriband. Consult with manufacturer for proper sizing of material.
- K. Sealant Colors
 1. For exposed materials, provide color as indicated or, if not indicated, as selected by the Project Architect from manufacturer's standard colors. For concealed materials, provide the natural color which has the best overall performance characteristics.

2.3 JOINT FILLERS

- A. Closed Cell Neoprene Joint Filler (for precast panel joints not compatible with Silicone Sealants): ASTM D 1056, Class SC (oil resistant and medium swell), 2 to 5 psi compression deflection.
- B. Expanded Polyethylene Joint Filler (for existing joints): Flexible, compressible, closed-cell polyethylene of not less than 10 psi compression deflection (25 percent).
- C. Closed-Cell Polyurethane or Closed-Cell Expanded polyethylene Joint Filler (for all cast-in-place concrete work): Resilient, compressible, semi-rigid.
 1. W.R. Meadow's Ceramar; A.C. Horn's Closed Cell Plastic Foam Filler, Code 5401; Sonneborn's Sonoflex F.
- D. ASTM D1056, Class RE41 (for masonry joints) where shown on the Drawings.
- E. Filler Sealant (for Parapet Expansion Joints): Polybutylene impregnated compressible polyurethane foam precompressed to 50% of its uncompressed length.
 1. "Polytite" by Polytite Manufacturing Corp. and distributed by W.R. Grace Co.

2.4 ACOUSTICAL SEALANT

- A. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 and the following requirements:
 1. Product is effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies per ASTM E 90.
 1. Product has flame-spread and smoke developed ratings of less than 25 per ASTM E 84.
- B. Products: Subject to compliance with requirements, provide one of the following:

1. Acoustical Sealant:

- a) AC-20 FTR Acoustical and Insulation Sealant, Pecora Corp.
- b) SHEETROCK Acoustical Sealant, United States Gypsum Co.
- c) FS-One, Hilti, Inc.

C. Locations: Voids at top of non-rated walls and partitions and penetrations through non-rated walls and partitions.

2.5 MISCELLANEOUS MATERIALS

- A. Joint Primer/Sealer/Conditioner: As recommended by the sealant manufacturer for the particular joint surface materials and conditions.
- B. Backer Rod: Compressible rod stock of expanded, extruded closed-cell polyethylene.
- C. Bond Breaker Tape: Polyethylene or other plastic tape as recommended by the sealant manufacturer; non-bonding to sealant; self-adhesive where applicable.
- D. Cleaning Solvents: Oil free solvents as recommended by the sealant manufacturer. Do not use reclaimed solvents.
- E. Masking Tape: Removable paper or fiber tape, self-adhesive, non-staining.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine all joint surfaces for conditions that may be detrimental to the performance of the completed Work. Do not proceed until satisfactory corrections have been made.

3.2 PREPARATION

- A. Clean joint surfaces immediately before installation of sealant and other materials specified in this Section.
 - 1. Remove all loose materials, dirt, dust, rust, oils and other foreign matter that will impair the performance of materials installed under this Section.
 - 2. Remove lacquers, protective coatings and similar materials from joint faces with manufacturer's recommended solvents.
 - 3. Do not limit cleaning of joint surfaces to solvent wiping. Use methods such as grinding, acid etching or other approved and manufacturer's recommended means, if required, to clean the joint surfaces, assuring that the sealant materials will obtain positive and permanent adhesion.
- B. For Pavements, Walks, and Curbs
 - 1. Set joint fillers at proper depth and position as required for installation of bond breakers, backer rods, and sealants. Do not leave voids or gaps between the ends of joint filler units.
 - a. Smooth Edged Joints: For joints between two concrete slabs or where new concrete abuts smooth-edged materials, use either cork joint filler or closed cell polyurethane joint filler.

- b. Irregular Edged Joints: For joints where new concrete abuts granite curbs or other irregular edges, use closed cell polyurethane joint filler.
- c. Priming Joint Surfaces:
 - 1. Prime joints which are to receive Type 1A and 1B Sealants.
 - 2. For joints of friable (crumbly, chalky) masonry surfaces and other surfaces which are to receive Type 1 Sealant, prime as recommended by Manufacturer.
 - 3. Prime joints other than those above if so recommended by the manufacturer's printed instructions.
 - 4. Do not allow the primer/sealer to spill or migrate onto adjoining surfaces.

3.3 JOINT BACKING INSTALLATION

- A. Install bond breaker tape in relaxed condition as it comes off the roll. Do not stretch the tape. Lap individual lengths.
- B. Install backer rod of sufficient size to fill the joint width at all points in a compressed state. Compress backer rod at the widest part of the joint by a minimum of 25 percent. Do not cut or puncture the surface skin of the rod.

3.4 SEALANT INSTALLATION

- A. Except as shown or specified otherwise, install sealants in accordance with the manufacturer's printed instructions.
- B. Install sealants with ratchet hand gun or other approved mechanical gun. Where gun application is impracticable, install sealant by knife or by pouring, as applicable.
- C. Types 2 and 2A Sealants: If low temperature makes application difficult, preheat sealants using manufacturer's recommended heating equipment.
- D. Finishing: Tool all vertical, non-sag sealants so as to compress the sealant, eliminating all air voids and providing a neat smoothly finished joint. Provide slightly concave joint surface, unless otherwise indicated or recommended by the manufacturer.
 - 1. Use tool wetting agents as recommended by the sealant manufacturer.

3.5 FIELD QUALITY CONTROL

- A. Test Samples
 - 1. If requested by the Authority, for each 1000 linear feet of joint installed, cut out and carefully remove a 6" long sample of the undisturbed sealant and joint backer material from the newly installed Work. Remove the samples in the presence of the Authority's Representative, who will retain them for evaluating and testing.
 - 2. Reseal cutout areas with the same type materials.

3.6 CLEANING

- A. Immediately remove misapplied sealant and droppings from metal surfaces with solvents and wiping cloths. On other materials, remove misapplied sealant and droppings by methods and materials recommended in writing by the manufacturer of the sealant material.
- B. After sealants are applied and before skin begins to form on sealant, remove all masking and other protection and clean up remaining defacement caused by the Work.

END OF SECTION

DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications, apply to this Section.

1.2 SUMMARY

- A. This Section includes items known commercially as finish or door hardware that are required for swing, sliding, and folding doors, except special types of unique hardware specified in the same sections as the doors and door frames on which they are installed.
- B. This Section includes the following:
 - 1. Hinges.
 - 2. Key control system.
 - 3. Lock cylinders and keys..
 - 4. Closers.
 - 5. Overhead holders.
 - 6. Miscellaneous door control devices.
 - 7. Door trim units.
 - 8. Protection plates.
 - 9. Weather-stripping for exterior doors.
 - 10. Astragals or meeting seals on pairs of doors.
 - 11. Thresholds.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Section 06105 "Miscellaneous Carpentry" for installation of door hardware.
 - 2. Section 08111 "Standard Steel Doors and Frames" for silencers integral with hollow metal frames.
 - 3. Section 08211 "Flush Wood Doors" for factory pre-fitting and factory pre-machining of doors for door hardware.
- D. Products furnished but not installed under this Section include:
 - 1. Cabinet Hardware is specified in Section 06402 "Interior Architectural Woodwork".
- E. Products not furnished under this Section include:
 - 1. Cabinet Hardware is specified in Section 06402 "Interior Architectural Woodwork".

1.3 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification sections.
 - 1. Hardware Schedule must be submitted in the "Vertical" Schedule DHI Format.
- B. Product data including manufacturers' technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information

necessary to show compliance with requirements.

- C. Final hardware schedule coordinated with doors, frames, and related work to ensure proper size, thickness, hand function, and finish of door hardware.
 - 1. Final Hardware Schedule Content: Based on hardware indicated, organize schedule into "hardware sets" indicating complete designation of every item required for each door or opening. Include the following information:
 - a. Type, style, function, size, and finish of each hardware item.
 - b. Name and manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of each hardware set cross-referenced to indications of Drawings both on floor plans and in door and frame schedule.
 - e. Explanation of all abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for hardware.
 - g. Door and frame sizes and materials.
 - h. Keying information.
 - 2. Submittal Sequence: Submit final schedule at earliest possible date particularly where acceptance of hardware schedule must precede fabrication of other work that is critical in the Project construction schedule. Include with schedule the product data, samples, shop drawings of other work affected by door hardware, and other information essential to the coordinated review of schedule.
 - 3. Keying Schedule: Submit separate detailed schedule indicating clearly how the Owner's final instructions on keying of locks has been fulfilled.
- D. Templates for doors, frames, and other work specified to be factory prepared for the installation of door hardware. Check shop drawings of other work to confirm that adequate provision are made for locating and installing door hardware to comply with indicated requirements.

1.4 QUALITY ASSURANCE

- A. Single Source Responsibility: Obtain each type of hardware (latch and locksets, hinges, closers, etc.) from a single manufacturer.
- B. Supplier Qualifications: A recognized architectural door hardware supplier, with warehousing facilities in the Project's vicinity, and has a record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project. Employs an experienced architectural hardware consultant (AHC) who is available to Owner, architect, and Contractor, at reasonable times during the course of the Work, for consultation.
 - 1. Require supplier to meet with Owner to finalize keying requirements and to obtain final instructions in writing.
- C. Fire-Rated Openings: Provide door hardware for fire-rated openings that complies with NFPA Standard No. 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and are identical to products tested by UL, Warnock Hersey, and Factory Mutual. Testing and inspecting organization acceptable to authorities having jurisdiction for use on types and sizes of doors indicated in compliance with requirements of fire-rated door and doorframe labels.

1.5 PRODUCT HANDLING

- A. Tag each item or package separately with identification related to final hardware schedule, and include basic installation instructions with each item or package.
- B. Packaging of door hardware is responsibility of supplier. Upon receipt of material by hardware supplier from manufacturers, sort and repackage in containers clearly marked with appropriate hardware set number to match set numbers of approved hardware schedule. Two or more identical sets may be packed in same container.
- C. Inventory door hardware jointly with representatives of hardware supplier and hardware installer until each is satisfied that count is correct.
- D. Deliver individually packaged door hardware items promptly to place of installation (shop or Project site).
- E. Provide secure lock-up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of the Work will not be delayed by hardware losses both before and after installation.

1.6 MAINTENANCE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Butts and Hinges:
 - a. Hager Hinge Co.
 - b. Stanley Hardware, Division of Stanley Works.
 - c. Essex Industries, Inc.
 - 2. Key Control System:
 - a. Key Control Systems, Inc.
 - b. Telkee Inc.
 - 3. Cylinders and Locks:
 - a. Best; 40H mortised series; privacy set; US26D finish
 - b. Best; 7T series deadbolt; US26D finish
 - 4. Flush Bolts (automatic where required);
 - a. Rockwood Manufacturing.
 - b. H. B. Ives, A Harrow Company.
 - c. Hager Hinge Co.

5. Overhead Closers:
 - c. LCN, Div. of Ingersoll-Rand Door Hardware Group. Model 4100 Series
6. Kick Plates:
 - a. Rockwood. Stainless steel satin finish, 1x" high x 2" less than door width for kicks and 1" less for mops.
 - b. Hager Hinge Co.
 - c. H. B. Ives, A Harrow Company.
7. Weatherstrip and Seals:
 - a. Pemko Manufacturing Co., Inc, all with stainless steel screws, etc.
 - b. Reese Enterprises, Inc.
 - c. Zero International, Inc.
8. Thresholds (full frame width)
 - a. Pemko Manufacturing Co., Inc.
 - b. Reese Enterprises, Inc.
 - c. Zero International, Inc.
9. Wall Stop (at all doors except where noted):
 - a. Rockwood Manufacturing.
 - b. H. B. Ives.
 - c. Hager Hinge Company.

2.2 SCHEDULED HARDWARE

- A. Requirements for each type of finish hardware are indicated on the "Door Schedule", and in the Schedule at the end of this Section. Products are identified by using hardware designation numbers of the following:

1. Manufacturer's Product Designations: The product designation and name of one manufacturer are listed for each hardware type required for the purpose of establishing minimum requirements. Provide either the product designated or, where more than one manufacturer is specified under the Article "Manufacturers" in Part 2 for each hardware type, the comparable product of one of the other manufacturers that complies with requirements.
2. ASNS/BHMA designations used elsewhere in this Section or in schedules to describe hardware items or to define quality or function are derived from the following standards. Provide products complying with these standards and requirements specified elsewhere in this Section.
 - a. Butts and Hinges: ANSI/BHMA A156.1.
 - b. Bored and Pre-assembled Locks and Latches: ANSI/BHMA A156.2.
 - c. Exit Devices: ANSI/BHMA A156.3
 - d. Door Controls - Closers: ANSI/BHMA A156.4.
 - e. Auxiliary Locks and Associated Products: ANSI/BHMA A156.5.
 - f. Architectural Door Trim: ANSI/BHMA A156.6.
 - g. Template Hinge Dimensions: ANSI/BHMA A156.7.
 - h. Door Controls - Overhead Holders: ANSI/BHMA A156.8.
 - i. Interconnected Locks and Latches: ANSI/BHMA A156.12.
 - j. Closer Holder Release devices: ANSI/BHMA A156.15.
 - m. Auxiliary Hardware: ANSI/BHMA A156.16.

- n. Self-Closing Hinges and Pivots: ANSI/BHMA A156.17.
- o. Materials and Finishes: ANSI/BHMA A156.18.

2.3 MATERIALS AND FABRICATION

- A. Manufacturer's Name Plate: Do not use manufacturers' products that have manufacturer's name or trade name displayed in a visible location (omit removable nameplates) except in conjunction with required fire-rated labels and as otherwise acceptable to Architect.
 - 1. Manufacturer's identification will be permitted on rim of lock cylinders only.
- B. Base Metals: Product hardware units of basic metal and forming methods indicated, using manufacturer's standard metal alloy, composition, temper, and hardness, but in no case of lesser (commercially recognized) quality than specified for applicable hardware units. Product hardware units to be applicable ANSI/BHMA A156 series standards for each type of hardware item, and with ANSI/BHMA A156.18 for finish designations indicated. Do not furnish "optional" materials or forming methods for those indicated, except as otherwise specified.
- C. Fasteners: Provide hardware manufactured to conform to published templates generally prepared for machine screw installation. Do not provide hardware that has been prepared for self-tapping sheet metal screws, except as specifically indicated.
- D. Furnish screws for installation with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. Finish exposed (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including "prepared for paint" surfaces to receive painted finish.
- E. Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent no standard units of type specified area available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless their use is the only means of reinforcing the work adequately to fasten the hardware securely. Where thru-bolts are used as a means of reinforcing the work, provide sleeves for each thru-bolt or use sex screw fasteners.

2.4 HINGES, BUTTS, AND CONTINUOUS (PIANO) HINGES

- A. Templates: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.
- B. Screws: Provide Phillips flat-head screws complying with the following requirements:
 - 1. For metal doors and frames install machine screws into drilled and tapped holes.
 - 2. For wood doors and frames install wood screws.
 - 3. For fire-rated wood doors install #12 x ¼ inch, threaded-to-the-head steel wood screws.
 - 4. Finish screw heads to match surface of hinges or pivots.
- C. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
 - 1. Out-Swing Exterior Doors: Non-removable pins.
 - 2. Out-Swing Corridor Doors with Locks: Non-removable pins.
 - 3. Interior Doors: Non-rising pins.
 - 4. Tips: Flat button and matching plug, finished to match leaves, except where hospital tips (HT) indicated.

D. Number of Hinges: Provide number of hinges indicated but not less than 3 hinges per door leaf for doors 90 inches or less in height and one additional hinge for each 30 inches of additional height.

1. Fire-Rated Doors: Not less than 3 hinges per door leaf for doors 86 inches or less in height with same rule for additional hinges.

E. SIZE AND WEIGHT OF BUTTS

1. See Hardware Headings for Details.

2.5 LOCK CYLINDERS AND KEYING

- A. Review the keying system with the Owner and provide the type required (grandmaster or great-grandmaster), integrated with Owner's existing system.
- B. Equip locks with manufacturer's special 6-pin tumbler cylinder with construction master-key feature that permits voiding of construction keys without cylinder removal.
- C. Metals: Construct lock cylinder parts from brass or bronze, stainless steel, or nickel silver.
- D. Comply with Owner's instructions for master keying and, except as otherwise indicated, provide individual change key for each lock that is not designated to be keyed alike with a group of related locks.
- E. Key Material: Provide keys of nickel silver only.
- F. Key Quantity: Furnish 3 change keys for each lock, 5 master keys for each master system, and 5 grandmaster keys for each grandmaster system. Furnish 12 construction masterkeys.
 1. Furnish one extra blank for each lock.
 2. Deliver keys to Owner.

2.6 KEY CONTROL SYSTEM

- A. Provide a key control system including envelopes, labels, tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet, all as recommended by system manufacturer, with capacity for 150 percent of the number of locks required for the Project.
 1. Provide complete cross-index system set up by key control manufacturer, and place keys on markers and hooks in the cabinet as determined by the final key schedule.
 2. Provide hinged-panel type cabinet for wall mounting.

2.7 LOCKS, LATCHES, AND BOLTS

- A. Strikes: Provide manufacturer's standard wrought box strike for each latch or lock bolt, with curved lip extended to protect frame, finished to match hardware set, unless otherwise indicated.
 1. Provide curved lip strikes for locks with anti-friction latchbolts as recommended by manufacturer.
 2. Provide recess type top strikes for bolts locking into head frames, unless otherwise indicated.

- 3. Provide dust-proof strikes for foot bolts, except where special threshold construction provides non-recessed strike for bolt.
- 4. Provide roller type strikes where recommended by manufacturer of the latch and lock units.
- B. Lock Throw: Provide $\frac{1}{2}$ inch standard throw of latch on all single and pairs except, provide $\frac{3}{4}$ inch minimum throw of latch on all pairs of UL doors. Comply with UL requirements for throw of bolts and latch bolts on rated fire openings.
- C. Flush Bolt Heads: Minimum of $\frac{1}{2}$ inch diameter rods of brass, bronze, or stainless steel with minimum 12-inch long rod for doors up to 7'-0" in height. Provide longer rods as necessary for doors exceeding 7'-0" in height.
- D. Where notation for knurling appears on door schedule, provide knurled outside lever.

2.8 CLOSERS AND DOOR CONTROL DEVICES

- A. Size of Units: Except as otherwise specifically indicated, comply with the manufacturer's recommendations for size of door control unit depending on size of door, exposure to weather, and anticipated frequency of use.
 - 1. Where parallel arms are indicated for closers, provide closer unit on size larger than recommended for use with standard arms.
 - 2. Provide parallel arms for all overhead closers, except as otherwise indicated.
 - 3. Closers must operate at 180 degree opening where indicated on plans.
- B. Access-Free Manual Closers: Where manual closers are indicated for doors required to be accessible to the physically handicapped, provide adjustable units complying with ANSI A117.1 provisions for door opening force and delayed action closing.
- C. Combination Door Closers and Holders: Where indicated, provide units designed to hold door in open position under normal usage and to release and close door automatically under fire conditions.
- D. Provide black resilient parts for exposed bumper.

2.9 DOOR TRIM UNITS

- A. Fasteners: Provide manufacturer's standard exposed fasteners for door trim units consisting of either machine screws or self-tapping screws.
- B. Fabricate protection plates not more than 2" inches less than door width on hinge side and not more than 1" inch less than door width on pull side by height indicated.
 - 1. Metal Plates: Stainless steel, 0.050 inch (U.S. 18 gage).

2.10 WEATHER-STRIPPING, SOUND STRIPPING AND SEALS

- A. General: provide continuous weather-stripping on exterior doors and smoke, light, or sound seals, including automatic drop seals on interior doors where indicated or scheduled. Provide non-corrosive fasteners for exterior applications and elsewhere as indicated.
- B. Replaceable Seal Strip: Provide only those units where resilient or flexible seal strip is easily replaceable and readily available from stocks maintained by manufacturer.

- C. Weather-stripping at Jamb and Heads: Provide bumper-type resilient insert and metal retainer strips, surface applied unless shown as mortised or semi-mortised, and of following metal, finish, and resilient bumper material:
 - 1. Extruded anodized finish aluminum, 0.094-inch minimum thickness of main walls and flanges, 4" wider than door.
 - 2. Sponge neoprene conforming to MIL R 6130, Class II (Closed Cell).
 - a. Grade A (30 degree F to 150 degree F, oil-resistant and self-extinguishing).
- D. Weather-stripping at Door Bottoms: Provide threshold consisting of contact-type resilient insert and metal housing of design and size shown and of following metal, finish, and resilient seal strip:
 - 1. Extruded aluminum with natural anodized finish, 0.062-inch minimum thickness of main walls and flanges.
 - 2. Solid neoprene wiper or sweep seal complying with MIL R 6855, Class II, and Grade 40.
 - 3. Flexible vinyl wiper or sweep seal strip.
 - 4. Brush pile insert of polypropylene or nylon woven pile and aluminum strip backing complying with AAMA 701.2.

2.11 THRESHOLDS

- A. General: Except as otherwise indicated, provide standard metal threshold unit of type, size and profile as shown or scheduled.
- B. Exterior Entrance Doors: Provide adjustable units not less than the width required extending to the edge of entry mat frame.

2.12 HARDWARE FINISHES

- A. Match items to the manufacturer's standard color and texture finish for the latch and lock sets (or push-pull units if not latch or lock sets), or unless noted otherwise in the specifications or hardware sets.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- C. The designations used in schedules and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18, "Materials and Finishes," including coordination with the traditional U.S. finishes shown by certain manufacturers for their products.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Installation of Door Hardware is by Section 06105 "Miscellaneous Carpentry".

3.2 HARDWARE SCHEDULE

- A. General: Provide hardware for each door to comply with requirements of Section 08710 "Door Hardware, Door Schedule Section 08710DS, and the following Hardware Sets. The finish hardware sets listed herein shall not be considered as a complete hardware schedule

and shall only be considered as an indication of the hardware requirements desired by the Owner. It shall be this Contractor's responsibility to visit the site, examine the drawings and door schedule and provide all necessary hardware as shown. Such items shall be of same quality, quantity and type as that scheduled for similar doors or parts of the building used for similar purposes.

- B. Prior to the submittal process, Door, Frame and Hardware Suppliers must verify in field all existing door and frame preparations for compatibility with new hardware specified. It is the responsibility of the Door, Frame, and Hardware Suppliers to insure that all new hardware will work with any and all existing conditions.

Hardware Set 001 (100, 101)

Hardware Set 001 (100, 101)

3	Hinge, Ball Bearing	BB1279 - 4.5 x 4.5 - US26D	Hager
1	Lockset, Privacy	40H Mortised Series - US26D	Best
1	Dead Bolt	Keyed 7T-Series	Best
1	Closer, Overhead Parallel Arm	4100	LCN
1	Kick Plate	16"x34" - 18 GA. - US32D	Rockwood
1	Stop, Wall	407 - US26D	H.B.Ives
3	Silencer, WD Dr. Frame	21R - Gray	H.B.Ives
1	Weatherstrip	332CR - 36" x 84"	Pemko
1	Weatherstrip	332DR - 36" x 80"	Pemko

Lockset and deadbolt to be provided with Best Key System as set up by the Town of West Hartford

Hardware Set 002 (103)

6	Hinge, Ball Bearing	BB1191 - 4.5 x 4.5 - US4 - NRP	Hager
1	Lockset, Storeroom	40H Mortised Series - US26D	Best 1
	Dust Proof Strike	489 - B10	H.B.Ives
2	Closer, Overhead Parallel Arm	4100 - 180 Degree Swing @ LHR-ACTIVE	LCN
1	Weatherstrip	332CR - 72" x 84"	Pemko
1	Weatherstrip	332DR - 72" x 80"	Pemko
2	Door Bottom Sweep	315DN x 36"	Pemko
2	Bolt, Flush	458 - B10	H.B.Ives
1	Dust Proof Strike	489 - B10	H.B.Ives
1	Threshold	172B - 6" x 1/2" - 72"	Pemko

Lockset and deadbolt to be provided with Best Key System as set up by the Town of West Hartford

END OF SECTION

LOUVERS AND VENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Fixed, extruded-aluminum louvers.
- B. Related Sections: The following sections contain requirements that relate to this Section:
 - 1. Division 7 Section "Joint Sealants" for sealants installed in perimeter joints between louver frames and adjoining construction.

1.3 DEFINITIONS

- A. Louver Terminology: Refer to Air Movement and Control Association (AMCA) 501 for definitions of terms for metal louvers not otherwise defined in this Section or in referenced standards.

1.4 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Engineer, fabricate, and install exterior metal wall louvers to withstand the effects of loads of stresses from wind and normal thermal movement without evidencing permanent deformation of louver components including blades, frames, and supports, noise or metal fatigue caused by louver blade rattle or flutter; or permanent damage to fasteners or anchors.
 - 1. Wind Load: Uniform pressure (velocity pressure) of 20 lbf/sq. ft., acting inwards or outwards.
 - 1. Normal thermal movement is defined as that resulting from the following maximum change (range) in ambient temperature. Base design calculations on actual surface temperatures of metals due to both solar heat gain and nighttime sky heat loss.
 - a. Temperature Change (Range) 100 deg F (56 deg C)
- B. Air-Performance, Water-Penetrations, and Air-Leakage Ratings: Provide louvers complying with performance requirements indicated as demonstrated by testing manufacturer's stock units of height and width indicated. Test units according to AMCA 500.
 - 1. Perform testing on unpainted, cleaned, degreased units.
 - 2. Perform water-penetration testing on louvers without screens.
 - 3. Equivalent Air-Performance Ratings: Louvers having less free area than that specified or having a lower free area velocity at the static pressure loss specified may be considered for the Work provided their total air performance is equivalent to that specified. The burden of proof of equivalency is on the Contractor. For Louvers to be considered

equivalent, the product of their free area velocity at the static pressure loss specified, must be at least equal to the product of the specified free area and velocity. Also, their free area velocity at the static pressure loss specified must not result in water penetration of more than 0.01 oz. Per sq.ft. of free area, and they must meet all other requirements.

1.5 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product data for each type of product.
- C. Shop drawings of louver units and accessories. Include plans, evaluations, sections, and details showing profiles, angles, and spacing of louver blades; unit dimensions related to wall openings and construction; free for each size indicated; profiles of frames at jambs, heads, and sills; and anchorage details and locations.
- D. Samples for initial selection in the form of manufacturer's color charts showing full range of colors available for units factory-applied color finishes.
- E. Samples for verification of each type of metal finish required, prepared on samples of same thickness and material indicated for final unit of Work. Where finishes involve normal color and texture variations, include sample sets showing the full range of variations expected.
- F. Product test reports evidencing compliance of units with performance requirements indicated.
- G. Product certificates signed by louver manufacturers certifying that their products comply with the specified requirements and are licensed to bear the AMCA seal based on tests made according to AMCA 500 and complying with AMCA Certified Ratings Program.
- H. Qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience.

1.6 QUALITY ASSURANCE

- A. Single-Source Responsibility: Obtain louvers and vents from one source and by a single manufacturer where alike in one or more respects regarding type, design, and factory-applied color finish.
- B. Welding Standards: Comply with applicable provisions of D1.2 "Structural Welding Code – Aluminum," and D1.3 "Structural welding Code – Sheet Steel."
 - 1. Certify that each welder has satisfactorily passed ASW qualification test for welding process involved and, if pertinent, has undergone recertification.

1.7 PROJECT CONDITIONS

- A. Field Measurements: Check actual louver openings by accurate field measurements before fabrication, and show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delaying of the Work.
 - 1. Where field measurements cannot be made without delaying the Work, guarantee opening dimensions and proceed with fabricating louvers without field measurements. Coordinate construction to ensure that actual opening dimensions correspond to guaranteed dimensions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Louvers:
 - a. Airstream Products Div., Penn Ventilator Co., Inc.
 - b. American Warming and Ventilating, Inc.
 - c. Construction Specialist, Inc.
- B. Products Manufactured by American Warming and Ventilating, Inc. are specified. Items designated establish intent for design and performance of specialties required by this Section.

2.2 MATERIALS

- A. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), Alloy 6063-T5 or T-52.
- B. Aluminum Sheet: ASTM B 209 (ASTM B 209M), Alloy 3003 or 5005 with temper as required for forming, or as otherwise recommended by metal producer for required finish.
- C. Fasteners: Of same basic metal and alloy as fastened metal or 300 series stainless steel, unless otherwise indicated. Do not use metals that are corrosive or incompatible with joined materials.
 - 1. Use types and sizes to suit unit installation conditions.
 - 2. Use Phillips flat-head screws for exposed fasteners, unless otherwise indicated.
- D. Anchors and Inserts: Of type, size, and material required for loading and installation indicated. Use nonferrous metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as needed for corrosion resistance. Use toothed steel or expansion bolt devices for drilled-in-place anchors.
- E. Bituminous Paint: Cold-applied asphalt mastic complying with SSPC-Paint 12 except containing no asbestos fibers.

2.3 FABRICATION, GENERAL

- A. General: Fabricate louvers and vents to comply with requirements indicated for design, dimensions, materials, joinery, and performance.
- B. Assemble louvers in factory to minimize field splicing and assembly. Disassemble units as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
- C. Maintain equal louver blade spacing to produce uniform appearance.
- D. Fabricate frames, including integral sills, to fit in openings of sizes indicated, with allowances made for fabrication and installation tolerances of louvers, adjoining construction, and perimeter sealant joints.
- E. Include supports, anchorages, and accessories required for complete assembly.

- F. Provide vertical mullions of type and at spacings indicated but not more than recommended by manufacturer, of 72 inches o.c., whichever is less. At horizontal joints between louver units, provide horizontal mullions except where continuous vertical assemblies are indicated.
- G. Provide sill extensions and loose sills made of same material as louvers where indicated or required for drainage to exterior and to prevent water penetrating to interior.
- H. Provide corner mullions made of same material as louvers where indicated or required for drainage to exterior and to prevent water penetrating to interior.
- I. Join frame members to one another and to fixed louver blades as follows, unless otherwise indicated or size of louver assemble makes bolted connections between frame members necessary:
 - 1. With fillet welds, concealed from view.

2.4 FIXED, EXTRUDED-ALUMINUM WALL LOUVERS

- A. Horizontal, Drainable, Fixed-Blade Louvers: Extrude-aluminum frames and louver blades, designed to collect and drain water to exterior at sill by mean of gutters in front of edges of blades and channels in jambs and mullions, complying with the following requirements:
 - 1. Louver Depth: 4 inches, unless otherwise indicates.
 - 2. Frame Thickness: 0.081 inch, unless otherwise indicated.
 - 3. Blade Thickness: 0.081 inch, unless otherwise indicated.
 - 4. Blade Angle: 35 degrees.
 - 5. Performance Requirements: As follows, determined by testing units 48 inches wide by 48 inches high per AMCA 500:
 - a. Free Area: Not less than 8.66 sq. ft.
 - b. Static Pressure Loss: Not more than 0.09 inch wg (35Pa) at an airflow of 900 fpm free area intake velocity.
 - c. Water Penetration: Not more than 0.01 oz. per sq. ft. of free area at an airflow of 900 fpm free area velocity when tested for 15 minutes.
 - 6. AMCA Seal: Mark units with the AMCA Certified Ratings Seal.
 - 7. Product: Model LE-23.

2.5 LOUVER SCREENS

- A. General: Provide each exterior louver with louver screens complying with the following requirements:
 - 1. Screen Location for Fixed Louvers: Interface.
 - 2. Screening Type: Bird Screening, unless otherwise indicated. Insect screening where indicated.
- B. Secure screens to louver frames with stainless-steel machine screws, spaced a maximum of 6 inches from each corner and at 12 inches o.c. between.
- C. Louver Screen Frames: Fabricate screen frames with mitered corners to louver sizes indicated and to comply with the following requirements:
 - 1. Metal: Same kind and form of metal as indicated for louver frames to which screens are attached.

- a. Reinforce extruded-aluminum screen frames at corners with clips.
- 2. Finish: Mill finish, unless otherwise indicated.
- 3. Type: Rewireable frames with a driven spline or insert for securing screen mesh.
- D. Louver Screening for Aluminum Louvers: Fit aluminum louver screen frames with screening covering louver openings and complying with the following requirements:
 - 1. Bird Screening: ½ inch-square mesh formed with 0.047-inch-diameter stainless-steel wire.
 - 2. Insect Screening: Stainless Steel, 18-by-18 mesh, 0.009-inch wire.

2.6 FINISHES, GENERAL

- A. Comply with NAAMM "Metal Finishes Manual" for recommendations for applying and designating finishes.
- B. Finish louvers after assembly.

2.7 ALUMINUM FINISHES

- A. Finish designations prefixed by AA comply with system established by the Aluminum Association for designating aluminum finishes.
- B. High-Performance Organic Coating Finish: AA-C12C42R1x Organic Coating as specified below. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' instructions.
 - 1. Fluoropolymer Two-Coat Coating System: Manufacturer's standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 605.2.
 - a. Color and Gloss: As selected by architect from manufacturer's full range of choices for color and gloss.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Coordinate Setting Drawings, diagrams, templates, instructions, and directions for installation of anchorages that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to Project site.

3.2 INSTALLATION

- A. Locate and place louver units level, plumb, and at indicated alignment with adjacent work.
- B. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weather tight connection.
- C. Form closely fitted joints with exposed connections accurately located and secured.

- D. Provide perimeter reveals and openings of uniform width for sealants and joint fillers, as indicated.
- E. Repair finishes damaged by cutting, welding, soldering, and grinding operations required for fitting and jointing. Restore finishes so no evidence remains of corrective work. Return items that cannot be refinished in the field to the shop, make required alterations, and refinish entire unit or provide new units.
- F. Protect galvanized and nonferrous-metal surfaces from corrosion or galvanic action by applying a heavy coating of bituminous paint on surfaces that will be in contact with concrete, masonry, or dissimilar metals.
- G. Install concealed gaskets, flashings, joint fillers, and insulation, as louver installation progresses, where weather tight louver joints are required. Comply with Division 7 Section for sealants applied during louver installation.

3.3 ADJUSTING AND PROTECTION

- A. Protect louvers from damage of any kind during construction period including use of temporary protective coverings where needed and approved by louver manufacturer. Remove protective covering at time of Substantial Completion.
- B. Restore louvers damaged during installation and construction period, so that no evidence remains of correction work. If results of restoration are unsuccessful, as judged by Architect, remove damaged units and replace with new units.
 - 1. Clean and touch up minor abrasions in finishes with air-dried coating that matches color and gloss of, and is compatible with, factory-applied finish coating.
- C. Test operation of adjustable wall louvers and adjust as needed to produce fully functioning units that comply with requirements.

3.4 CLEANING

- A. Periodically clean exposed surfaces of louvers that are not protected by temporary covering to remove fingerprints and soil during construction period. Do not let soil accumulate until final cleaning.
- B. Before final inspection, clean exposed surfaces with water and a mild soap or detergent not harmful to finishes. Thoroughly rinse surfaces and dry.

END OF SECTION

SIGNAGE

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following types of signs:
 - 1. Panel signs.
- B. Related Sections: The following Sections contain requirements that relate to this Section:

1.03 SUBMITTALS

- A. General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product data for each type of sign specified, including details of construction relative to materials, dimensions of individual components, profiles, and finishes.
- C. Shop drawings showing fabrication and erection of signs. Include plans, elevations, and large-scale sections of typical members and other components. Show anchors, grounds, layout, reinforcement, accessories, and installation details.
 - 1. Provide message list for each sign required, including large-scale details of wording and lettering layout.
 - 2. For signs supported by or anchored to permanent construction, provide setting drawings, templates, and directions for installation of anchor bolts and other anchors to be installed as a unit of Work in other Sections.
 - 3. Templates: Furnish full-size spacing templates for individually mounted dimensional letters.
 - 4. Furnish full-size computer generated graphic for metal plaque.
- D. Samples: Provide the following samples of each sign component for initial selection of color, pattern and surface texture as required and for verification of compliance with requirements indicated.
 - 1. Samples for initial selection of color, pattern, and texture:
 - 2. Panel Sign: For final verification of color, pattern, texture, lettering, graphic images, and other graphic devices, submit full-size sample of a panel sign specified in this Section.
- E. All submittals will be to and on request from the Architect.

1.04 QUALITY ASSURANCE

- A. Sign Fabricator Qualifications: Firm experienced in producing signs similar to those indicated for this Project, with a record of successful in-service performance, and sufficient production capacity to produce sign units required without causing delay in the Work.
- B. Single-Source Responsibility: For each separate sign type required, obtain signs from one source of a single manufacturer.

1.05 PROJECT CONDITIONS

- A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication to ensure proper fitting. Show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay.

1.06 WARRANTY

- A. Project Warranty: Comply with requirements of Division 1.
- B. Warranty Period: One year from product ship date. Warranty specifically excludes letter mounting substrate

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. ASI Sign Systems, Inc.
 2. The Supersine Company.
 3. EMED Company, Inc.
 4. Seton Company, Inc.

2.02 MATERIALS

- A. Mounting Height: 60 inches above finished floor, unless otherwise noted for interior signs.

2.03 PANEL SIGNS, GENERAL

- A. Panel Signs: Comply with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes, and details of construction.
1. Produce smooth, even, level sign panel surfaces, constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally.
- B. Raised Sign copy: Raise copy 1/32-inch from plaque surface by manufacturer's photomechanical stratification processes. Uniformly opaque, precisely formed graphics shall comply with applicable ADA regulations including size, style, spacing, content, position, and colors.

2.04 PANEL SIGNS

- A. Unframed Panel Signs: Raised (tactile) room plaques shall be die-raised aluminum plate, 0.102 inches thick by 3-1/2 inches high, by length to fit copy. Lettering to be 1-inch high Helvetica Medium. Letters and numbers to have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10. All signs shall have braille equivalent.
- B. All building entries which are handicapped accessible shall be clearly identified with the international symbol of accessibility for the physically handicapped in accordance with Section 4:28 of ANSI A117.1.

- C. All rooms shall be identified with raised letters and numbers. Such identification shall be placed on the wall adjacent to the latch side of the door or on the doors as directed by the Architect at a height of 60 inches above the floor or as near thereto as possible.

1. Fasteners: Tamper-proof, stainless steel screws and silicone.

2.05 FINISHES

- A. Colors and Surface Textures: For exposed sign material that requires selection of materials with integral or applied colors, surface textures or other characteristics related to appearance, provide color matches indicated, or if not indicated, as selected by the Architect from the manufacturer's standards.
- B. Metal Finishes: comply with NAAMM "Metal Finishes Manual" for finish designations and applications recommendations. Plaque is bronze with raised letters.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. General: Locate sign units and accessories where indicated by the Architect, using mounting methods of the type described and in compliance with the manufacturer's instructions.
1. Install signs level, plumb, and at the height indicated, with sign surfaces free from distortion or other defects in appearance.
- B. Wall-Mounted Panel Signs: Attach panel signs to wall surfaces using the methods indicated below:
1. Tamper-proof Screws and Silicone-Adhesive Mounting: Use liquid silicone adhesive recommended by the sign manufacturer to attach sign units to irregular, porous, or vinyl-covered surfaces. Use countersunk stainless steel tamper-proof screws and shields where required.

3.02 CLEANING AND PROTECTION

- A. After installation, clean soiled sign surfaces according to the manufacturer's instructions. Protect units from damage until acceptance by Architect.
- B. Repair scratches and other damage, which might have occurred during installation. Replace components where repairs were made but are still visible to the unaided eye from a distance of 10 feet.

3.03 SIGNAGE SCHEDULE

- a. **PANEL SIGNS – Provide the following signs and respective quantities. Locations indicated by door number:**

1)	SIGN	QUANTITY	LOCATION
	Restroom	1	100
	Restroom	1	101

Note: Provide handicap signage where required.

END OF SECTION

STEEL DOORS AND FRAMES

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Finish Hardware: Section 087100.
- B. Glass and Glazing: Section 088100.

1.02 SUBMITTALS

- A. Shop Drawings: Show details of each frame type, elevation and construction for each door type, conditions at openings, location and installation requirements for finish hardware including cutouts and reinforcements, details of connections, and anchorage and accessory items.
 - 1. Include a schedule of doors and frames using the same reference numbers for details and openings as those shown on the Contract Drawings.
- B. Product Data: Manufacturer's catalog sheets, specifications, and installation instructions.
- C. LEED Design Submittals:
 - 1. MR Credit 4.1 and MR Credit 4.2: Identify manufacturer's name, the percentage of post-consumer recycled content by weight, the pre-consumer recycled content by weight, and the cost of the product.
 - 2. MR Credit 5.1 and MR Credit 5.2: Identify source, cost, and the fraction by weight that is considered regional.
- D. Samples:
 - 1. Frames: Corner sample of each type, 18 x 18 inches, with mortises and reinforcements, shop primed.
 - 2. Doors: Corner sample of each type showing construction, 18 x 18 inches, with mortises and reinforcements, shop primed.

1.03 QUALITY ASSURANCE

- A. Fire Rated Assemblies: Wherever a fire resistance classification is shown or scheduled for steel doors and frames; provide fire rated units that have been tested as fire door assemblies, and comply with National Fire Protection Association (NFPA) Standard No. 80 and these specifications. Identify each door and frame with a metal UL, FM, or WHI label. Indicate the applicable fire class on the door label. Rivet or weld labels on the hinge edge of door and jamb rabbet of frame. If continuous hinges are specified, rivet or weld labels on the header rabbet of frame and on top exposed edge of door. Locate labels as close to hinge edge as possible.
 - 1. Oversize Assemblies: Whenever fire rated assemblies are larger than size limitations established by NFPA; provide the manufacturer's certification that they have been constructed with materials and methods equivalent to requirements for labeled construction.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver doors and frames in heavy paper cartons or other protective packaging.
- B. Store doors and frames on raised platforms in vertical position with blocking between units to allow air circulation.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Hot-Rolled Steel Sheets and Strip: Commercial quality carbon steel, pickled and oiled, complying with ASTM A 569 and ASTM A 568.
- B. Cold-Rolled Steel Sheets: Commercial quality carbon steel complying with ASTM A 366 and ASTM A 568.
- C. Galvanized Steel Sheets: Zinc-coated carbon steel sheets of commercial quality complying with ASTM A 526, with A 60 zinc coating, mill phosphatized, complying with ASTM A 525.
- D. Anchors and Supports: Fabricate of not less than 16 gage sheet steel unless otherwise indicated.
 - 1. Galvanized Units: Galvanize anchors and supports to be used with galvanized frames, complying with ASTM A 153, Class B.
- E. Anchorage Devices, Bolts, and Other Fasteners: Manufacturer's standard units unless otherwise indicated.
 - 1. Galvanized Units: Galvanize items to be used with galvanized frames complying with ASTM A 153, Class C or D as applicable.

2.02 DOORS

- A. General:
 - 1. Design and Thickness: Flush design doors, seamless, hollow construction, 1-3/4 inches thick.
 - 2. Sound Deadening (ASTM E 90): Minimum Sound Transmission Class (STC) of 25.
 - 3. Door Edges: Bevel lock stile edge of single acting hinged doors 1/8 inch in 2 inches. Double acting doors shall have rounded edges, approximately 2-1/4 inch radius. Meeting stiles of pairs of single acting doors shall be "V" beveled, unless otherwise specified or shown.
 - 4. Glazing Stops and Beads: Fixed steel stops, formed integral with door unless otherwise acceptable to the Director, on the outside of exterior doors and on the secure side of interior doors. Removable steel beads, of not less than 20 gage formed sheet or solid bar stock, on the other side of doors secured with machine screws; form corners with butted hairline joints. Coordinate width of rabbet between fixed stop and removable bead and depth of rabbet with type of glass and glazing required.
 - 5. Astragals: Steel, attached with machine screws unless shown otherwise.

- B. Exterior Doors:
1. Fabricate exterior doors with 2 outer stretcher-leveled, galvanized steel sheets not less than 16 gage. Construct doors with smooth, flush surfaces without visible joints or seams on exposed faces or stile edges, except around glass and louver panels. Vertical edges may be continuously MIG or ARC welded and ground smooth, or intermittent welded 2 inches oc and body filled and dressed to achieve a seamless edge.
 2. Reinforce inside of doors with one of the following:
 - a. Vertical, full door height, channel-shaped or hat-shaped or interlocking z-shaped sheet steel sections of not less than 20 gage thickness. Space the reinforcing sections on not more than 6 inch centers and spot weld on 4 inch centers to both face sheets.
 - b. Roll-formed 18 gage sheet steel reinforcing, 4 vertical and a minimum of 8 horizontal members, double projection welded to both face sheets on not more than 6 inch centers.
 - c. Continuous truss-form inner core of 28 gage sheet steel reinforcing. Spot weld on 3 inch centers, vertically and horizontally, to both face sheets.
 - d. Phenolic resin impregnated kraft paper, single piece core of one inch hexagonal cells, securely bonded to both face sheets with waterproof adhesive.
 3. Reinforce top and bottom of doors with 16 gage horizontal steel channel welded to the outer sheets. Close top and bottom edges with flush steel weather seal. Weather seal may be an integral part of door construction, or formed by addition of another steel channel or filler plate welded to the door.
 4. Insulate doors to achieve a maximum coefficient of thermal transmittance (apparent "U" Factor) of 0.40.

2.03 FRAMES

- A. General:
1. Furnish steel frames for doors, transoms, sidelites, borrowed lites, and other openings wherever shown, of size and profile as specified or shown.
 2. Construction: Full-welded unit construction, with corners mitered and continuously welded full depth and width of frame, unless otherwise specified or shown. Knock-down type frames will not be accepted.
 - a. Fixed Stops: Integral 5/8 inch stop unless otherwise shown.
 - b. Removable Beads: Removable steel beads secured with machine screws. Form corners with butted hairline joints.
 - c. Prepare door frames for silencers as required.
 - d. Do not drill frames for silencers.
- B. Exterior Frames: Form exterior frames of galvanized steel sheets, not less than 12, 14, or 16 gage for openings up to 4 feet wide, and not less than 12 gage for larger openings.
- C. Interior Frames: Form interior frames of either hot-rolled or cold-rolled steel sheets, not less than 12, 14, or 16 gage for openings up to 4 feet wide, and not less than 12, or 14 gage for larger openings.

1. Form interior frames of galvanized steel sheets in high humidity spaces where shown.
 2. Terminated Stops: Terminate 6 inches above floor, cut at 45 degree angle, and close bottom of stop with a metal filler plate welded in place.
- D. Mullions and Transom Bars:
1. Furnish closed or tubular mullions and transom bars where shown. Fasten mullions and transom bars at crossings and to jambs by butt welding. Reinforce joints between frame members with concealed clip angles or sleeves of same metal and thickness as frame.
 2. Furnish false head member to receive lower ceiling where frames extend to finish ceilings of different heights.
 3. Where installed in masonry, leave vertical mullions in frames open at the top so they can be filled with grout.
- E. Wall Anchors: Unless otherwise specified or shown, formed of not less than 16 gage steel, and galvanized when used with galvanized frames.
1. Masonry Construction: Adjustable, corrugated or perforated T-shaped to suit frame size with leg not less than 2 inches wide by 10 inches long. Furnish at least 3 anchors per jamb up to 7'-6" jamb height; 4 anchors per jamb to 8 foot jamb height; one additional anchor per jamb for each 24 inches or fraction thereof over 8 feet high.
 4. Anchors for Completed Openings: Anchorage devices designed to secure frame to in-place concrete or in-place masonry construction, as applicable. Furnish at least 5 anchors per jamb up to 7'-6" jamb height; 6 anchors per jamb to 8 foot jamb height; one additional anchor per jamb for each 12 inches or fraction thereof over 8 feet high.
- F. Floor Anchors: Furnish floor anchor for each jamb and mullion which extends to floor, formed of not less than 16 gage steel, with 2 holes to receive fasteners, welded to bottom of jamb or mullion, and galvanized if used with galvanized frames.
- G. Head Anchors: Furnish 2 anchors at head of frames exceeding 42 inches wide for frames mounted in steel stud walls. Frame manufacturer's standard head anchor unless otherwise shown.
- H. Structural Reinforcing Members: Furnish structural reinforcing members, as a part of frame assembly, where indicated at mullions, transoms, and other locations.
- I. Shipping Bars: Removable spreader bar across bottom of frames, tack welded to jambs and mullions.
- J. Mortar Guards: 26 gage steel mortar or plaster guards, welded to frame, at back of finish hardware cutouts where mortar or other materials might obstruct hardware operation.

2.04 FRAMES FOR COMPLETED OPENINGS

- A. Where shown, furnish frames consisting of rough buck and slip (finish) buck.
1. Galvanize members of exterior frames.

- B. Rough Buck: Furnish rough buck at the jambs only, consisting of a channel with one leg approximately 3/4 inch, the other approximately 1-1/2 inches, and with a 12 gage stiffening clip at hinge reinforcing.
 - 1. Use 12 gage steel for exterior frames.
 - 2. Use 14 gage steel for interior frames.
 - 3. Anchors:
 - a. 3/8 inch dia machine bolts with metal expansion shields for concrete and solid masonry.
 - b. 3/8 inch dia toggle bolts for hollow portions of masonry.
 - c. Unless otherwise shown, furnish at least 5 anchors per jamb up to 7'-6" jamb height; 6 anchors per jamb to 8 foot jamb height; one additional anchor per jamb for each 12 inches or fraction thereof over 8 feet high.
- C. Finish Buck: Furnish a slip buck with mitered corners welded and ground smooth.
 - 1. Use 14 gage steel for exterior frames.
 - 2. Use 16 gage steel for interior frames.
- D. Mullions and Transom Bars: Furnish closed or tubular mullions and transom bars where shown. Fasten mullions and transom bars at crossings and to jambs by butt welding. Reinforce joints between frame members with concealed clip angles or sleeves of same metal and thickness as frame.

2.05 PANELS

- A. Furnish panel units as indicated.
 - 1. Fabricate exterior panels same as specified for exterior doors.
 - 2. Fabricate interior panels same as specified for interior doors.

2.06 LOUVERS

- A. Except for fire rated louvers, fabricate louvers to mount flush into doors without overlapping moldings on surface of door-facing sheets. Provide internal support as recommended by louver manufacturer.
- B. Exterior Louvers: Stationary type, constructed of "Z" shaped blades formed of 16 gage galvanized steel sheets. Space blades not more than 1-1/2 inches oc. Furnish removable insect screen on interior face of door, consisting of 14 x 18 bronze wire mesh in rigid, formed metal frame.
- C. Interior Louvers: Sightproof, stationary type, constructed of inverted "Y" shaped blades formed of 18 gage cold-rolled steel. Space blades to provide not less than 30 percent free air opening.
- D. Fire Rated Louvers: Listed, fusible link, self-closing fire door type.

2.07 FABRICATION

- A. Fabricate steel door and frame units to be rigid, neat in appearance, and free from warp, buckle and other defects. Accurately form metal to required sizes and profiles. Weld exposed joints, and make smooth, flush and invisible by filling or

grinding and dressing. Wherever practicable, fit and assemble units in the manufacturer's plant. Clearly identify items that cannot be permanently factory-assembled before shipment, to assure proper assembly at the project site.

- B. Exposed Fasteners: Countersunk, flat or oval Phillips head for exposed screws and bolts. Unless otherwise specified or shown, locate fasteners 2 inches from each end of members and not more than 12 inches apart.
- C. Exposed Fasteners: Countersunk flat tamper-resistant head for exposed screws and bolts. Unless otherwise specified or shown, locate fasteners 2 inches from each end of members and not more than 12 inches apart.
- D. Finish Hardware Preparation:
 - 1. Prepare doors and frames to receive mortised and concealed finish hardware, including cutouts, reinforcing, drilling and tapping, in accordance with Finish Hardware Schedule and templates furnished by hardware manufacturer.
 - 2. Reinforce doors and frames to receive surface applied hardware. Drilling and tapping for this hardware shall be done at the project site.
 - 3. Locate finish hardware as specified elsewhere or as shown on the hardware manufacturer's templates.
 - 4. Weld 14 gage steel tongues, 1-1/2 inches high, inside lock mortise to keep lock body centered in door.
 - 5. Install 7 gage reinforcement for hinges and pivots, except hinge reinforcement in door edge may be a one-piece 12 gage channel full door height with extruded hinge screw holes having an average minimum thread pull-out strength of 1600 pounds per hole. Install 12 gage reinforcement for all other hardware.
 - 6. Reinforce doors not mortised for concealed door closers for surface door closer application, and all frames for closer arm application, whether or not closers are specified.
- E. Clearances: Fabricate doors for their respective frames within the following clearances:
 - 1. Jambs and Head: 3/32 to 1/8 inch.
 - 2. Meeting Edges of Pairs: 1/8 to 1/4 inch.
 - 3. Bottom (no threshold or carpet): 3/4 inch, maximum to finished surface.
 - 4. Bottom (at threshold or carpet): 3/8 inch, maximum to top of threshold or carpet.
 - 5. Fire Rated Doors: Comply with clearances specified in NFPA Standard No. 80.
- F. Shop Painting:
 - 1. Chemically wash, rinse, and dry exposed and concealed surfaces of fabricated units.
 - 2. Apply one coat of primer to all surfaces and oven-bake units.
 - 3. Units shall be capable of passing the following tests:
 - a. Salt Spray Test complying with ASTM B 117 for 120 continuous hours.
 - b. Water Fog Test complying with ASTM D 1735 for 240 continuous hours.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Examine the substrate and conditions under which the frames are to be installed for defects that will adversely affect the execution and quality of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. Install steel doors, frames, and accessories in accordance with the manufacturer's printed instructions, except as otherwise specified or shown.
- B. Frame Installation: Place frames accurately in position; plumb, align, and brace securely until permanent anchors are set. After wall construction is complete, remove temporary braces and spreader bars, leaving surfaces smooth and undamaged.
 - 1. Floor anchors may be set with powder-actuated fasteners instead of anchorage devices and machine screws, if so approved on final shop drawings.
 - 2. Place fire rated frames in accordance with NFPA Standard No. 80.
 - 3. Make necessary field splices in frames as detailed on final shop drawings, welded and finished to match factory fabrication.
 - 4. Placing Frames For Completed Openings: Secure to in-place concrete and in-place masonry construction with anchorage devices. Set anchorage device opposite each anchor location in accordance with details on final shop drawings and anchorage device manufacturer's instructions. Leave drilled holes rough, not reamed, and free from dust and debris.
- C. Door Installation:
 - 1. Install doors accurately in their respective frames within the clearances specified in Part 2.
 - 2. Place fire rated doors with clearances as specified in NFPA Standard No. 80.
- D. Drill and tap doors and frames to receive surface applied hardware.

3.03 ADJUSTING

- A. Prime Coat Touch-up: Immediately after installation, sand smooth and clean rusted and damaged areas of shop prime coat and apply touch-up of compatible air-drying primer.
- B. Final Adjustments: Check and readjust operating finish hardware items just prior to final inspection. Leave Work in complete and proper operating condition.

3.04 CLEANING

- A. Clean doors, frames, and accessories free of dirt and other foreign materials after completion of installation.

END OF SECTION

ACCESS DOORS

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Cylinders for Fire Rated Access Doors: Section 087100.

1.02 SUBMITTALS

- A. Product Data: Catalog sheets, specifications, and installation instructions.
- B. LEED Design Submittals:
1. MR Credit 4.1 and MR Credit 4.2: Identify manufacturer's name, the percentage of post-consumer recycled content by weight, the pre-consumer recycled content by weight, and the cost of the product.
 2. MR Credit 5.1 and MR Credit 5.2: Identify source, cost, and the fraction by weight that is considered regional.
 3. EQ Credit 4.2: Identify the manufacturer's name, the product name, specific VOC data and the allowable VOC from the reference standard for each indoor paint or coating utilized on the project. Provide a narrative description of any special circumstances or non-standard compliance paths taken.

1.03 QUALITY ASSURANCE

- A. Regulatory Requirements:
1. Fire Rated Access Doors For Walls: Complete assemblies complying with Underwriter's Laboratories, Inc (UL) requirements for 1-1/2 hour "B Label" rating. Identify each assembly with UL label.
 2. Fire Rated Access Doors For Ceilings: Complete assemblies complying with Warnock Hersey (WHI) requirements for one-hour rating in wood-framed assemblies and three-hour rating in non-combustible assemblies. Identify each assembly with WHI label and NFPA requirement indicating "For Horizontal Installation".

PART 2 PRODUCTS

2.01 NON-FIRE RATED ACCESS DOORS FOR WALLS AND CEILINGS

- A. Frames: Minimum 16 gage steel.
1. Flange: Integral exposed flange not less than 3/4 inch wide around the perimeter.
 2. Plaster Applications: Expanded metal lath and exposed casing bead welded to perimeter of frame, in place of integral exposed flange.
 1. Acoustical Tile Applications: Frames without exposed flange.
 2. Finish: Match door panel.
 3. Anchorage, Except for New Concrete or Masonry Construction: Predrilled holes in frame for anchoring with fasteners.

3. Anchorage for New Concrete or Masonry Construction: Adjustable metal masonry anchors.
- B. Door Panel: Flush type, minimum 14 gage steel.
 1. Hinges: Concealed type set to open a minimum of 135 degrees; continuous type, or sufficient number to support the door size.
 2. Finish: Factory-applied rust inhibitive baked enamel or primer over phosphate treated steel.
- C. Door Panel: Recessed type, minimum 18 gage steel with face of panel formed to provide a 1 inch recessed surface for application of finish material, and reinforced as required to prevent buckling.
 1. Hinge: Continuous type hinge.
 2. Finish: Factory-applied rust-inhibitive baked enamel or primer over phosphate treated steel.
 3. Plaster Applications: Self-furring 3.4 lb. per sq. yd. galvanized expanded metal mesh welded to panel face and casing bead welded to perimeter of panel.
- D. Cam Locks: Flush, screwdriver operated; sufficient number to hold door panel in flush, smooth plane when closed.
- E. Cam Locks: Flush screwdriver or key operated; sufficient number to hold door panel in flush, smooth plane when closed.
 1. One lock on each door panel shall be key operated, pin tumbler type. The remaining locks, if any, shall be screwdriver operated type.
 2. One lock on each door panel shown or scheduled shall be key operated, pin tumbler type. The remaining locks shall be screwdriver operated type.
 3. Key all locks alike. Furnish _____ keys total.
- F. Sleeves (For Recessed Type Door Panels): One for each locking device.
 1. Plaster Ceilings: Integral steel sleeves welded to panel face with plastic grommet on exposed end.
 2. Acoustic Tile or Gypsum Board Ceilings: Plastic grommets for installation in holes cut thru ceiling finish material.

2.02 FIRE RATED ACCESS DOORS FOR WALLS AND CEILINGS

- A. Frames: Minimum 16 gage steel, with integral exposed flange not less than one inch wide around the perimeter.
 1. Anchorage, Except for New Concrete or Masonry Construction: Predrilled holes in frame for anchoring with fasteners.
 2. Anchorage for New Concrete or Masonry Construction: Adjustable metal masonry anchors.
- B. Door Panel: Flush type, minimum 20 gage steel double wall construction with insulation, equipped with automatic closer and inside release mechanism.
 1. Hinge: Concealed pin hinge or continuous hinge set to open to approximately 100 degrees.
- C. Finish: Factory-applied baked enamel or primer over phosphate treated steel.

- D. Automatic Latches: Direct action knurled knob or turn ring operated; sufficient number to hold door panel in flush, smooth plane when closed. Equip each latch with inside release device.
- E. Automatic Latches: Direct action knurled knob or turn ring, or key operated; sufficient number to hold door panel in flush, smooth plane when closed. Equip each latch with inside release device.
 - 1. One latch on each door panel shall be operated by a flush key. The remaining latches, if any, shall be knurled knob or turn ring operated type.
 - 2. One latch on each door panel shown or scheduled shall be operated by a flush key. The remaining latches shall be knurled knob or turn ring operated type.
 - a. Furnish _____ flush keys total.
 - 3. One latch on each door panel shall have either mortise preparation or rim cylinder latch. Builders Hardware Manufacturers Association, Inc. (BHMA) standard cylinder provided under Section 087100.
 - 4. One latch on each door panel shown or scheduled shall have either mortise preparation or rim cylinder latch. Builders Hardware Manufacturers Association, Inc. (BHMA) standard cylinder provided under Section 087100.
 - 5. Each latch on each door panel shall be operated by a flush key.
 - a. Furnish _____ flush keys total.
 - b. One latch on each door panel shall have either mortise preparation or rim cylinder latch. Builders Hardware Manufacturers Association, Inc. (BHMA) standard cylinder provided under Section 087100.
 - c. One latch on each door panel shown or scheduled shall have either mortise preparation or rim cylinder latch. Builders Hardware Manufacturers Association, Inc. (BHMA) standard cylinder provided under Section 087100.

2.03 FABRICATION

- A. Assemble access doors as integral units complete with all parts and ready for installation. Fabricate units of continuous welded steel construction unless otherwise indicated or specified. Grind welds smooth and flush with adjacent surfaces. Anchorage devices shall be of size and type required to secure access doors to types of supports indicated on the Drawings.
 - 1. Allowable Size Variations: Manufacturer's standard size units which vary slightly from the sizes indicated may be acceptable, subject to the approval of the Director.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install the access doors in accordance with the manufacturer's printed installation instructions, except as shown or specified otherwise.
- B. Coordinate access door installation with installation of supporting construction.

- C. Set units accurately in position and securely attach to supports with face panel plumb or level in relation to adjoining finish surface.

3.02 ADJUSTING

- A. Adjust hardware and doors for proper operation.

3.03 SCHEDULE

- A. Provide non-fire rated access doors in non-fire rated construction and fire rated access doors in fire rated construction.

END OF SECTION

GYPSUM BOARD SYSTEMS

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Cold Formed (Load Bearing) Metal Framing: Section 054000.
- B. Non-Load Bearing Framing and Furring: Section 092213.
- C. Furring for Gypsum Board Ceilings: Section 092214.
- D. Tile Backer Board: Section 092813.

1.02 DEFINITIONS

- A. Sheet Steel Gages: US Standard.
- B. Gypsum Board Terminology: ASTM C 11 - Standard Terminology Relating to Gypsum and Related Building Materials and Systems.

1.03 SUBMITTALS

- A. Product Data: Catalog sheets, specifications, and installation instructions for each item specified.
- B. Samples:
 - 1. Steel Framing: 12 inches long, each component specified.
 - 2. Gypsum Board: 12 inches square, each type specified.
 - 3. Shaft-Wall Gypsum Liner Panels: 12 inches square.
 - 4. Fasteners: 10 each type specified.
 - 5. Adhesive: 1 pint.

1.04 QUALITY ASSURANCE

- A. Fire Resistance Rated Applications: Provide UL listed or ASTM E 119 tested materials, accessories, and application procedures to comply with the rating, UL Design Number, or Gypsum Association File Number indicated.
- B. Sound Transmission Class (STC) Rated Applications: Provide materials and installation procedures identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413.
- C. Single Source Responsibility: Obtain components for gypsum board shaft-wall assemblies from a single manufacturer for each type of assembly required.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer.

- B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Stack gypsum panels flat to prevent sagging.

1.06 PROJECT CONDITIONS

- A. Environmental Requirements: Comply with gypsum board manufacturer's printed temperature and ventilation requirements during application and finishing. Ventilate installation areas to relieve excess moisture.

PART 2 PRODUCTS

2.01 FRAMING

- A. Studs, Tracks, and Furring: ASTM C 645; 25 gage (minimum base metal thickness 0.0179 inch) galvanized steel, with additional framing members, reinforcing, accessories, and anchors necessary for the complete framing system.
 - 1. Deep-Leg Deflection Track: ASTM C 645 top runner with 2 inch deep flanges.
 - 2. Hat-Shaped, Rigid Furring Channels: ASTM C 645; 25 gage (minimum base metal thickness 0.0179 inch) galvanized steel.
 - 3. Resilient Furring Channels: Steel furring members designed to reduce sound transmission.

2.02 GYPSUM BOARD

- A. Standard Gypsum Board: ASTM C 1396; long edges as follows:
 - 1. Long Edges: Tapered.
 - 2. Long Edges: Tapered with beveled or rounded edges.
- B. Fire Resistant Gypsum Board: ASTM C 1396; Type X, UL listed and bearing listing marking; long edges as follows:
 - 1. Long Edges: Tapered.
 - 2. Long Edges: Tapered with beveled or rounded edges.
- C. Moisture Resistant Gypsum Board: ASTM C 1396; long edges tapered.
- D. Moisture and Fire Resistant Gypsum Board: ASTM C 1396; Type X, UL listed and bearing listing mark; long edges tapered.
- E. Foil-Backed Gypsum Board: ASTM C 1396; back surface with aluminum foil, long edges tapered.
- F. Gypsum Backing Board: ASTM C 1396; long edges square.
- G. Gypsum Sheathing Board: ASTM C 1396; long edges square.
- H. Exterior Gypsum Soffit Board: ASTM C 1396; long edges beveled or eased.

- I. Polycarbonate Laminated Gypsum Board: Type X 5/8 inch Fire Resistant Gypsum Board laminated to .080 inch thick polycarbonate. Laminated product shall meet "Class A" interior wall and finish classification. Long edges of gypsum board tapered with beveled or rounded edges.
 1. Acceptable Products:
 - a. CoreGuard by Pinnacle Armor, 5425 E. Home Ave. #104, Fresno, CA 93727, (800) 200-0915, www.pinnaclearmor.com.
 - b. NuGuard Security Wall Panels, Nudo Products, Inc., 1500 Taylor Ave., Springfield, IL 62703, (800) 826-4132, www.nudo.com.
- J. Polycarbonate Laminated Gypsum Board: Type X nominal 5/8 inch fire resistant gypsum board laminated to .030 inch thick polycarbonate. Laminated product shall meet "Class A" interior wall and finish classification. Long edges of gypsum board tapered with beveled or rounded edges.
 1. Acceptable Products:
 - a. CoreGuard by Pinnacle Armor, 5425 E. Home Ave. #104, Fresno, CA 93727, (800) 200-0915, www.pinnaclearmor.com.
 - b. NuGuard Security Wall Panels by Nudo Products, Inc., 1500 Taylor Ave., Springfield, IL 62703, (800) 826-4132, www.nudo.com.
- K. Shaft-Wall Assemblies: Materials and components listed in manufacturer's published product literature for gypsum board shaft-wall assemblies required.
 1. Steel Framing: ASTM C 645, of profile, size and base metal thickness to produce assemblies complying with indicated or required fire rating and structural properties.
 2. Gypsum Liner Panels: Manufacturer's standard or recommended panels as required for the specific fire-resistant rated gypsum board shaft-wall assemblies indicated, with moisture resistant paper facings.
 3. Gypsum Board: ASTM C 1396, type as required by fire-resistant assembly indicated; long edges tapered.

2.03 FASTENERS

- A. Steel Drill Screws: ASTM C 1002; gypsum board manufacturer's recommended types and sizes for substrates involved.
- B. Laminating Adhesive: Gypsum board manufacturer's recommended type for substrates involved.
- C. Expansion Anchors: ASTM F 1554, Grade 36, of dimensions indicated; with nuts, ASTM A 563; and, where indicated, flat washers.
- D. Toggle Bolts: Tumble wing type.
 1. Wing Body: AISI 1008-1010 or equivalent cold rolled steel.
 2. Trunnion Nut: 1/4 inch thru 3/8 inch AISI 1010 steel; 1/2 inch Zamac alloy.
 3. Screw: Carbon steel.
- E. Self Threading Masonry Screws: Zinc plated; Tapcon Fasteners by ITW Buildex 1349 West Bryn Mawr Ave. Itasca, IL 60143, (800) 284-5339.

2.04 TRIM

- A. Interior Trim: ASTM C 1047.
 - 1. Material: Galvanized steel or extruded vinyl.
 - 2. Shapes:
 - a. Cornerbead: Use at outside corners.
 - b. Bullnose Bead: Use where indicated.
 - c. LC-Bead: J-Shaped, exposed long flange receives joint compound. Use at exposed panel edges.
 - d. L-Bead: L-shaped, exposed long leg receives joint compound with tear away bead. Use where gypsum board abuts or intersects dissimilar material.
 - e. U-Bead: J-shaped, exposed short flange does not receive joint compound. Use where indicated.
 - f. Expansion (Control) Joint: Use where indicated.
- B. Exterior Trim: ASTM C 1047.
 - 1. Materials: Hot-dip galvanized steel.
 - 2. Shapes:
 - a. Cornerbead: Use at outside corners.
 - b. LC-Bead: J-shaped, exposed long flange receives joint compound. Use at exposed panel edges.
 - c. Expansion (Control) Joint: One-piece, with V-shaped slot and removable strip covering slot opening.

2.05 ACCESSORIES

- A. Sound Attenuation Blankets: ASTM C 665, Type 1; semi-rigid, mineral fiber blankets without membrane covering. Furnish blankets of thickness, density, and type tested by the gypsum board manufacturer for the required rating.
- B. Acoustical Sealant for Exposed and Concealed Joints: Nonsag, paintable, nonstaining, latex sealant complying with ASTM C 834 that effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
- C. Acoustical Sealant for Concealed Joints: Non drying, nonhardening, nonskinning, nonstaining, gunnable, synthetic-rubber sealant recommended for sealing interior concealed joints to reduce airborne sound transmission.
- D. Flattened Expanded Metal Mesh: ASTM F 1267, Type II, Class 1, grade as selected by fabricator; 13 gage, 1/2 inch carbon sheet steel, diamond style.

2.06 JOINT TREATMENT MATERIALS

- A. Joint Tapes: ASTM C 475; plain or perforated.
- B. Joint Compound: ASTM C 475; gypsum board manufacturer's recommended dry powder or ready-mixed, either of the following:
 - 1. One Compound Treatment: One compound for both bedding and finishing joints.

2. Two Compound Treatment: Compatible joint compounds; one compound for bedding and the other compound for finishing joints.
- C. Special Edged Gypsum Board: Gypsum board manufacturer's special joint treatment materials.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates to which gypsum board system attaches or abuts, preset steel door frames, cast in anchors, and structural framing, with installer present for compliance with requirements for installation tolerances and other conditions affecting performance of gypsum board system construction. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 CONSTRUCTION TOLERANCES

- A. Do not exceed 1/8 inch in 8 feet variation from plumb or level in any exposed line or surface, except at joints between boards do not exceed 1/16 inch variation between planes or abutting edges or ends. Shim as required to comply with specified tolerances.

3.03 STEEL FRAMING INSTALLATION

- A. Installation Standards: ASTM C 754, and ASTM C 840 requirements that apply to framing installation.
- B. Install supplementary framing, blocking, and bracing at terminations in gypsum board system to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction. Comply with details indicated and with gypsum board manufacturer's written recommendations.
- C. Isolate partitions from structural elements as indicated to prevent transfer of structural loads or movements to partitions.
- D. Isolate partitions from structural elements with slip or cushion-type joints between steel framing and structure as recommended by steel framing manufacturer to prevent transfer of structural loads or movements to partitions.
- E. Partition Framing Installation:
 1. Align tracks accurately at floor and ceiling. Secure tracks as recommended by the framing manufacturer for the floor and ceiling construction involved, except do not exceed 24 inches oc spacing for powder-driven fasteners, or 16 inches oc for other types of attachment. Provide fasteners approximately 2 inches from corners and ends of tracks.
 2. Position studs vertically and engage both floor and ceiling tracks. Install studs so flanges point in the same direction and leading edge or end of each panel can be attached to open (unsupported) edge of stud flanges first. Space studs 16 inches on center, unless otherwise indicated on the Drawings. Fasten studs to track flanges with screws or by crimping.

3. Use full length studs between tracks wherever possible. If necessary, splice studs with a minimum 8 inch nested lap and fasten with two screws per stud flange.
 4. Install additional studs to support inside corners at partition intersections and corners, and to support outside corners, terminations of partitions, and both sides of control joints (if any).
 5. Extend partition framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing over frames for doors and openings and frame around ducts penetrating partitions above ceiling to provide support for gypsum board.
 6. Brace chase wall framing horizontally to opposite studs with 12 inch wide gypsum board gussets or metal framing braces, spaced vertically not more than 4 feet on center.
 - a. Attach gypsum board gussets with a minimum 3 screws per stud flange.
 - b. Attach metal framing braces with a minimum 2 screws per stud flange.
 7. Install rough framing at openings consisting of full-length studs adjacent to jambs and horizontal header and sill tracks. Cut horizontal tracks to length and split flanges and bend webs at ends for flange overlap and screw to jamb studs. Install intermediate studs between jamb studs at head and sill sections, at same spacing as full-length studs.
 8. At door frames, install rough framing as specified above. Install jamb studs to comply with framing manufacturer's recommendations for the types of frames and weights of doors required. Fasten jamb studs to metal frames with anchor clips using 2 self tapping screws or bolts per clip. Where wood frames are shown, fasten jamb studs to rough framing with screws.
 9. Where solid core wood doors, double doors, or doors weighing more than 50 lb are indicated or scheduled, install two studs at each jamb and one additional stud not more than 6 inches from jamb studs.
 10. Where vertical control joints are shown at jamb lines, install additional vertical studs located on opening side of jambs and not less than 1/2 inch from jamb studs. Do not fasten the additional studs to tracks or jamb studs.
 11. Where wall mounted door bumpers are scheduled, provide horizontal reinforcement consisting of 2 pieces of framing installed back-to-back, flush with the face of adjacent stud flanges.
- F. Surface Mounted Rigid Steel Furring Installation:
1. Install rigid steel furring where gypsum board is to be installed over masonry or concrete wall substrates, unless otherwise shown.
 2. Install steel furring at 24 inches oc maximum spacing and provide additional furring at openings, cutouts, and corners. Securely anchor with fasteners spaced 24 inches oc maximum and stagger on opposite flanges of hat-shaped channels.
- G. Resilient Furring Channel Installation: Where indicated as "resilient", install resilient furring channels. Install furring at right angles to supports, spaced not more than 24 inches oc and not more than 6 inches from interior corners. Attach furring at each support and to corner framing with screws in accordance with manufacturer's instructions.

3.04 SHAFT-WALL ASSEMBLY INSTALLATION

- A. Install shaft-wall assemblies to comply with performance requirements indicated and with the manufacturer's published installation instructions.

3.05 ACOUSTICAL ACCESSORIES INSTALLATION

- A. STC-Rated Assemblies: Comply with STC rating indicated.
 - 1. Multi-layer application.
 - a. Balanced Partitions: Two or more layers applied to each sides of supports.
 - b. Unbalanced Partitions: One layer applied to one face and 2 layers applied to other face.
- B. Sound Attenuation Blankets: Install in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions, and tight to items passing through partitions.
- C. Acoustical Sealant: ASTM C 919; install continuous bead of acoustical sealant at gypsum board perimeter. Seal wherever gypsum board abuts dissimilar materials. Seal spaces between gypsum board and all penetrating items. Seal sides and backs of electrical and mechanical items.

3.06 GYPSUM BOARD INSTALLATION

- A. Install flattened expanded metal mesh in accordance with the manufacturer's printed instructions.
 - 1. Install flattened expanded metal mesh in the most economical direction, of maximum panel sizes to minimize joints and the use of small pieces.
 - 2. Use minimum number of fasteners required to hold panels in place until the gypsum board is installed.
- B. Install gypsum board in the most economical direction, of maximum lengths to minimize end butt joints. Where unavoidable, locate end butt joints as far from center of walls or ceilings as possible.
- C. Install gypsum board with face side out. Butt boards together at edges and ends over firm bearing with not more than 1/16 inch of open space between boards. Do not force into place.
- D. Fasteners: Fasten gypsum board to supports and furring with steel drill screws of required size and spacing as recommended by the gypsum board manufacturer.
 - 1. Multiple-layer Work:
 - a. Mechanically fasten both layers.
 - b. Multiple-layer Work: Laminate second layer to base layer with adhesive. Provide temporary nails for removal after drying or permanent screws for temporary support of second layer.
 - c. Stagger vertical joints in multiple layer Work. Offset joints not less than 10 inches.
- E. Provide additional framing and blocking required to support gypsum board at openings and cutouts.

- F. Form control joints in gypsum board where indicated. Allow 1/2 inch continuous opening between boards to allow for insertion of control joint trim.
- G. Wood Supports: Provide "floating" interior angle construction between gypsum board at interior corners.
- H. Reinforce joints formed by tapered edges, butt edges, and interior corners or angles with joint tape.

3.07 TRIM INSTALLATION

- A. Coordinate installation of trim progressively with gypsum board installation where trim is of type required to be installed prior to, or progressively with installation of gypsum board.
- B. Securely fasten trim pieces in accordance with manufacturer's printed instructions.
- C. Install cornerbeads at external corners. Install LC-Bead (J-Bead) beads at unprotected (exposed) edges and where gypsum board abuts dissimilar materials. Use single unjointed lengths unless otherwise approved by the Director.
 - 1. Miter corners of semi-finishing type casing and trim beads.
- D. Install control joint trim in accordance with ASTM C 840, where indicated.
- E. Comply with joint compound manufacturer's recommended drying time for the relative humidity and temperature at time of application. Allow minimum of 24 hours drying time between applications of joint compound.
- F. Except Type X Gypsum Board: Joint compound treatment is not required on gypsum board surfaces installed above suspended ceiling lines.
- G. Type X Gypsum Board: Install joint and corner reinforcing and trim, and one coat of joint compound over joints, fastener heads, and metal flanges above suspended ceiling lines.

3.08 LEVELS OF GYPSUM BOARD FINISH

- A. General: Finish panels to levels indicated below, in accordance with ASTM C 840, for locations indicated.
 - 1. Level 1 Finish: Joints and angles, provide tape embedded in joint compound. Surface shall be free of excess joint compound. Tool marks and ridges will be acceptable.
 - 2. Level 2 Finish: Joints and angles, provide tape embedded in joint compound and provide one separate coat of joint compound over the tape and fastener heads. Cover accessories with one coat of joint compound. Surface shall be free of excess joint compound. Tool marks and ridges will be acceptable. Joint compound applied over the body of the tape at the time of tape embedment will be considered a separate coat of joint compound and will satisfy the conditions of this level.

3. Level 3 Finish: Joints and angles, provide tape embedded in joint compound and provide two separate applications of joint compound over all joints, angles, and fastener heads. Accessories shall be covered with two separate coats of joint compound. Joint compound to be smooth and free of tool marks and ridges. Cover the prepared surface with a drywall primer prior to the application of the final decoration.
4. Level 4 Finish: Joints and angles, provide tape embedded in joint compound and provide three separate coats of joint compound over all joints, angles, and fastener heads. Accessories to be covered with three separate coats of joint compound. Joint compounds to be smooth and free of tool marks and ridges. Cover the prepared surface with a drywall primer prior to the application of the final decoration.
5. Level 5 Finish: Provide tape embedded in joint compound over joints and angles, and provide three separate coats of joint compound over all joints, angles, and fastener heads. Cover accessories with three separate coats of joint compound. Joint compounds to be smooth and free of tool marks and ridges. Apply a skim coat. Remove excess material; leave a film covering the paper. Cover the prepared surface with a drywall primer prior to application of the final decoration.

END OF SECTION

FURRING FOR GYPSUM BOARD CEILINGS

PART 1 GENERAL

1.01 PRODUCTS FURNISHED BUT NOT INSTALLED UNDER THIS SECTION

- A. Concrete Inserts: Installed under the Work of Section 033000.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Non-Load Bearing Framing and Furring: Section 092213.
- C. Gypsum Board Systems: Section 092116.

1.03 DEFINITIONS

- A. Gages:
 - 1. Sheet Steel: US Standard.
 - 2. Steel Wire: US Steel Wire Gage.
- B. Galvanizing: Hot dip process, unless otherwise indicated.

1.04 DESIGN REQUIREMENTS

- A. The furring system shall support the weight of the ceiling system (including finish) plus the weight of the lighting system. Additional intermediate supports (struts) and hangers shall be included as required to support the required weights.
 - 1. The actual fixture weights and locations will be furnished by the Electric Work Contractor (thru the Director's Representative).

1.05 SUBMITTALS

- A. Product Data: Manufacturer's specifications and installation instructions for the following:
 - 1. Main Beams.
 - 2. Cross Channels.
 - 3. Channel Mold.
 - 4. Cross Tees.
 - 5. Hangers.

1.06 QUALITY ASSURANCE

- A. Fire Resistive Rated Applications: Provide UL listed or ASTM E 119 tested materials, accessories, and application procedures to comply with the rating indicated.

1.07 STORAGE

- A. Protect metal items against distortion and rusting.

1.08 PROJECT CONDITIONS

- A. Sequencing: Coordinate furring with adjoining Work.
 - 1. Coordinate delivery of items to be cast in poured concrete, to avoid delay.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Main Beams: Minimum 24 gage, 1-1/2 inches by 15/16 inch galvanized steel tee sections, slotted 8 inches oc for intersecting cross channels or cross tees and 4 inches oc for hangers, with integral splices stamped at each end.
 - 1. Minimum Moment of Inertia: .0280 in⁴.
 - 2. Minimum Section Modulus: .0290 in³.
- B. Cross Channels: Minimum 25 gage, 2-7/8 inches by 7/8 inch galvanized steel hat shaped sections, with stamped locks on each end to fit corresponding slots in main beams and knurled screw surfaces.
- C. Channel Mold: Minimum 25 gage, 1 inch by 1 inch by 1/2 inch galvanized steel channel sections.
- D. Cross Tees (For Fire Rated Ceiling Systems): Minimum 25 gage galvanized steel tee sections, with stamped locks on each end to fit corresponding slots in main beams.
- E. Hangers:
 - 1. Minimum Size: As specified or shown on the Drawings; if not indicated, comply with minimum size requirements of ASTM C 841 for maximum ceiling area to be supported.
 - 2. Flat Type: 3/16 x 1 inch mild steel straps, galvanized or painted with black asphaltum paint, punched or drilled for 3/8 inch diameter bolts.
 - 3. Rod Type: Galvanized mild steel pencil rods.
 - 4. Wire Type: Type 302 stainless steel.
 - 5. "T" Type: 16 gage galvanized steel hangers; Fehr Bros. Mfgs., Inc.'s "T-Hangers".
- F. Inserts: Hohmann and Barnard's No. HD Threaded Insert for 1/2 inch diameter bolt.
- G. Clips for Attaching Hangers to Steel Joists: Galvanized steel clips or clamps specifically designed for this purpose, which do not depend on friction to hold device in place. Use of drive-on clips or clamps will not be permitted.
- H. Welded Studs: Low carbon steel copper flashed studs, 1/4 - 20 UNC, automatic short-cycle welded with a transformer-rectifier power source. When surface on which studs are installed is to receive fireproofing, furnish studs of length to extend one inch below fireproofing.
- I. Expansion Anchors: Double cinch type, of soft metal alloy.
- J. Bolts: 3/8 inch diameter, length as required for full threads for nut.

PART 3 EXECUTION

3.01 INSTALLATION

- A. General:
 - 1. Install Work of this section in accordance with the manufacturer's printed instructions, except as otherwise indicated.
 - 2. Do not bridge expansion joints with grillage.
- B. Hangers: Unless otherwise shown, install hangers as follows:
 - 1. Attachment to Poured Concrete Slabs: Embed a part or member of hanger assembly in the concrete in a manner to develop full strength of hanger.
 - 2. Attachment to Structural Steel Framing: Clinch hanger around top flange of steel framing member approximately 135 degrees. If framing member supports roof planks or precast slabs, bolt hanger to center of web or weld to bottom flange. Where applicable, hanger wires may be directly double wound around steel members with wire twisted together securely.
 - 3. Attachment to Steel Joists: Secure hanger with special clip or clamp designed for such use. Where applicable, hanger wires may be directly double wound around steel members with wire twisted together securely.
 - 4. Attachment to Precast Tees, Slabs and Planks: Insert "T" hangers through joints between the units. Where concrete fill is required, lay out and install hangers prior to placing fill.
 - 5. Attachment to Steel Decks: Secure hangers with welded studs. Locate studs as close to deck supports as possible. Install studs in accordance with manufacturer's instructions. After installation, clean stud welds and repair the affected areas of deck and studs with cold galvanizing compound. Attach hangers to stud bolts with double nuts.
 - 6. Attachment to Wood Framing (Except Trusses): Secure hanger with threaded fastener.
 - 7. Attachment to Wood Trusses: Double wind hanger wire around bottom chord member and twist wire together securely.
- C. Openings: Frame openings, including openings for items provided under Related Contracts (if any), with extra cross channels or cross tees unless otherwise indicated.
- D. Furring: Erect furring to form a true plane, or curved surface where so designed, and securely fasten in place. Set cross channels or cross tees perpendicular to main beams.
- E. Suspended Ceilings:
 - 1. Form suspended ceilings with hangers, channel mold, main beams, cross channels and/or cross tees.
 - 2. Attach hangers to supporting construction, spaced 4 feet oc and within 6 inches of ends of main beams. Where ducts or other items, including items provided under Related Contracts (if any), interfere with the spacing of hangers, install trapeze type hangers under the obstructing items to support ceiling hangers.

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EISENHOWER PARK
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- F. Furred Ceilings: Form furred ceilings with cross channels, unless otherwise indicated.

END OF SECTION

TOILET AND BATH ACCESSORIES

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

1.02 SUBMITTALS

- A. Shop Drawings: Details for grab bars.
- B. Product Data: Specifications or data sheets and installation instructions for each product required.
- C. Samples: One full size sample of each product required, unless otherwise specified, complete with mounting devices and fasteners. These samples will be returned unless otherwise specified. If approved, samples may be used in the Work.
- D. Contract Closeout Submittals: Furnish the following, as applicable, for each product required:
 - 1. Operation and maintenance data.
 - 2. Parts list.
 - 3. Keys and tools.

1.03 QUALITY ASSURANCE

- A. Provide products from more than one manufacturer if necessary to meet the requirements of this Section.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's original protective packaging.
 - 1. Furnish items with protective wrappings or covers as required to protect finishes. Do not remove protective coverings until completion of other Work liable to damage accessory finish.
- B. Pack products with required trim, mounting devices, fasteners, service tools or keys, and complete installation instructions.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Stainless Steel: AISI Type 302/304 with No. 4 satin finish, unless otherwise indicated.
- B. Brass: Cast or forged quality alloy, FS WW-P-541D/GEN.
- C. Sheet Steel: Cold rolled, commercial quality, ASTM A 366.

1. Galvanized: Zinc coated, ASTM A 123.
- D. Mounting Devices and Fasteners: Stainless steel, unless otherwise indicated.
- E. Chromium Plating: Nickel and chromium electro-deposited on metal; ASTM B 456, Type SC 2, satin finish unless otherwise indicated.

2.02 FABRICATION

- A. Fabricate stainless steel dispenser and disposal units of one-piece welded construction with seamless corners, unless otherwise specified.
 1. Recessed Units: Fabricate with integral, continuous, one piece stainless steel trim flange one inch wide with 1/4 inch return. Furnish flanges free of open mitres.
- B. Equip units with keyed vandal-resistant lock where key access is specified.
- C. Mounting Devices: If not indicated, furnish type and size compatible with accessory unit specified which will securely mount accessory to wall or partition construction indicated.
 1. Grab Bars: Furnish anchoring devices which will withstand minimum downward pull of 500 pounds.
- D. Exposed Mounting Devices and Fasteners:
 1. Type: Theft-resistant.
 2. Finish: Match accessory finish, unless otherwise indicated.
 3. Masonry Construction: Furnish stainless steel machine screws in nonferrous expansion anchors except furnish stainless steel toggle bolts where anchorage occurs in masonry cavities.

2.03 KEYS AND TOOLS

- A. Keys: Furnish minimum of 2 keys and an additional 2 keys for every 6 key operated accessories.
 1. Key similar key access units alike unless otherwise specified.
- B. Tools: Furnish socket wrenches compatible with set screws of concealed theft-resistant fastenings. Furnish minimum of 2 wrenches and an additional 2 wrenches for every 6 accessories having such fastenings.

2.04 MIRRORS

- A. Types:
 1. Type A: Polished stainless steel tilt down frame.
- B. Size: Unless otherwise indicated, furnish mirror units with overall frame size 18 x 24 inches.
- C. Mirror Frame and Hanger Assembly: Furnish the following for mirror Types A, B,
 3. Mounting Frame (Hanger Bracket): One of the following options, with 3/16 inch cadmium plated steel wall fasteners of type and length to suit wall construction:

- a. Box or rectangular type, welded construction, fabricated of 18 gage galvanized steel, with four 18 gage locking tabs located to align with slots and locking devices on back plate. Mounting frame shall have 4 holes, one near each locking tab, for fastening frame to wall.
- b. H type, welded construction, fabricated of 18 gage galvanized steel, designed to be locked to the frame at top and bottom by the 4 theft-resistant set screws. Mounting frame shall have 4 holes, one near each frame locking point, for fastening frame to wall.

2.09 DOUBLE ROLL TOILET TISSUE DISPENSERS - SURFACE MOUNTED (DRTTD-SM)

- A. Owner supplied and contractor installed.

2.12 WASTE RECEPTACLES - SURFACE MOUNTED (WR-SM)

- A. Owner supplied and contractor installed.

2.18 LATHER SOAP DISPENSERS - SURFACE MOUNTED (LSD-SM)

- A. Owner supplied and contractor installed.

2.23 TOWEL HOOKS (TH)

- A. Towel pin extending approximately 3-1/2 inches from wall and flange approximately 2 x 2 inches, fabricated of chromium plated heavy forged brass or heavy gage stainless steel. Units shall have heavy duty concealed back plate and theft-resistant fastening.

2.25 GRAB BARS (GB)

- A. Grab bar assemblies consisting of stainless steel tubing with integrally welded mounting flanges secured to concealed tenon plates with theft-resistant fasteners, and complying with the following requirements:
1. Tubing: Stainless steel, 1-1/2 inch od x 18 gage wall thickness. Bend tubing at each end and join to flanges by concealed welding. Total projection from wall line (including bar diameter): 3 inches.
 2. Flanges: Stainless steel, 3 inch diameter, 11 gage wall thickness, not less than 1/2 inch deep.
 3. Finish: Brush satin finish, unless otherwise indicated.
 4. Finish On Grab Bars: Striated non-slip polished finish in a continuous cross-hatched (diamond) pattern or shot peened non-slip finish, on entire bar surface exclusive of returns (ends).
 5. Tenon Plates: Stainless steel, 13 gage discs. Tenon plates shall be designed to allow plate location adjustment.
 6. Fasten grab bar flanges to tenon plates with not less than 3 concealed fasteners equally spaced around flange.

7. Intermediate Posts: Stainless steel tubing and integral flange welded to grab bar. Grind welds smooth and finish posts to match returns (ends).
8. Configurations: Where only small dimensional variations are involved, manufacturer's standard dimensions for various configurations may be used where conditions permit.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Unless otherwise indicated, install Work of this Section in strict accordance with the manufacturer's instructions.
 1. Install all attachments, anchorage devices, and fasteners as required to securely mount accessory units to types of wall or partition construction indicated.
- B. Toilet Tissue Dispensers - Surface Mounted: Install units back-to-back where possible when indicated for 2 or more compartments with dividing stall partitions. Fasten dispensers through backs with stainless steel through bolts and bonnet nuts.
- C. "Model A" Double Roll Toilet Tissue Dispensers - Surface Mounted: Install units back-to-back where possible when indicated for 2 or more compartments with dividing stall partitions. Fasten through backs of dispensers with 1/4 inch diameter sex bolts. Enlarge screw slots in unit back plates as required.

3.02 CLEANING AND POLISHING

- A. Remove protective wrappings from installed accessories after completion of other Work liable to damage accessory finish. Remove residue, if any, and polish exposed surfaces.

END OF SECTION